

Jan. 1994  
No. 60086

# **JVC** Service Manual

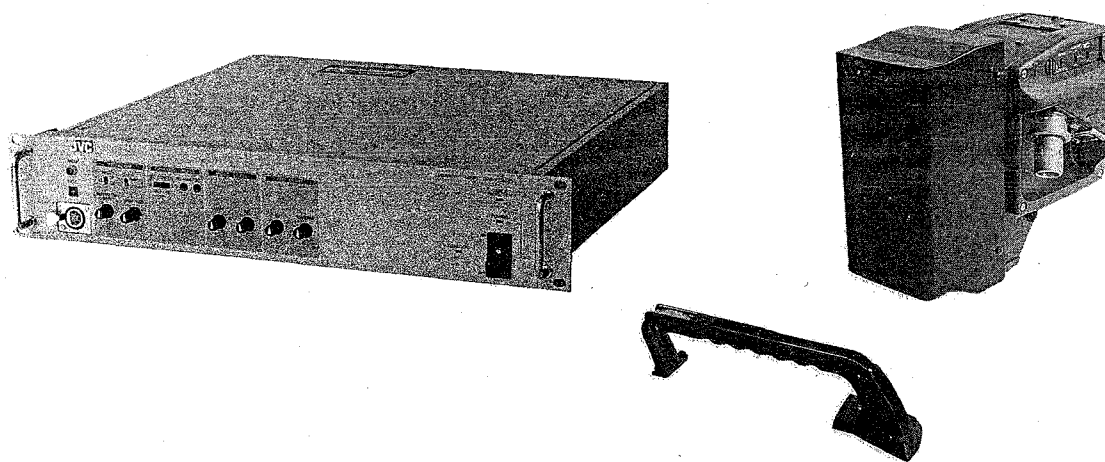
**TRIAXIAL UNIT  
(and CAMERA ADAPTER)**

**MODEL RM-P270**

**VICTOR COMPANY OF JAPAN, LIMITED**

No. 60086

# **JVC** Service Manual



**MODEL RM-P270**

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# Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

## ● Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the  symbol and shaded (■) parts are critical for safety.

Replace only with specified part numbers.

**Note:** Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.  
Caution for continued protection against fire hazard.  
Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:

- 1) Wires covered with PVC tubing
- 2) Double insulated wires
- 3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:

- |                    |                                      |            |
|--------------------|--------------------------------------|------------|
| 1) Insulation Tape | 3) Spacers                           | 5) Barrier |
| 2) PVC tubing      | 4) Insulation sheets for transistors |            |

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

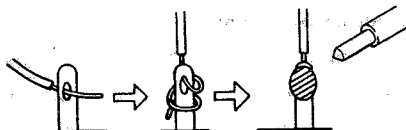


Fig. 1

7. Observe that wires do not contact heat producing parts (heat-sinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10–15 kg of force in any direction will not loosen it.

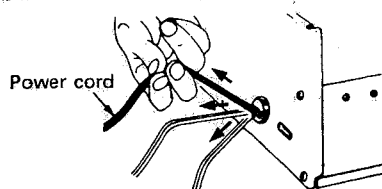


Fig. 2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)

In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector

In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

1) **Connector part number** : E03830-001

2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.

3) **Replacement procedure**

(1) Remove the old connector by cutting the wires at a point close to the connector.

Important : Do not reuse a connector (discard it).

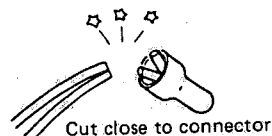


Fig. 3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

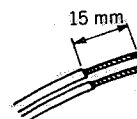


Fig. 4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

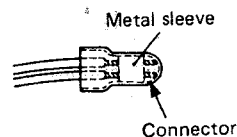


Fig. 5

(4) As shown in Fig. 6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

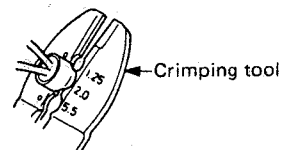


Fig. 6

(5) Check the four points noted in Fig. 7.

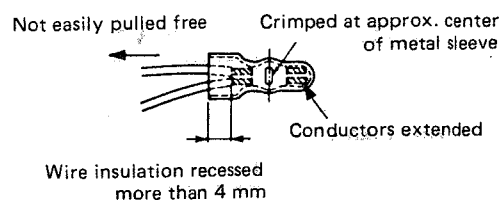


Fig. 7



## ● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

### 1. Insulation resistance test

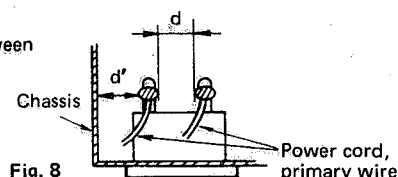
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

### 2. Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

### 3. Clearance distance

When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

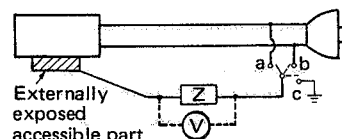


### 4. Leakage current test

Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

**Measuring Method:** (Power ON)

Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

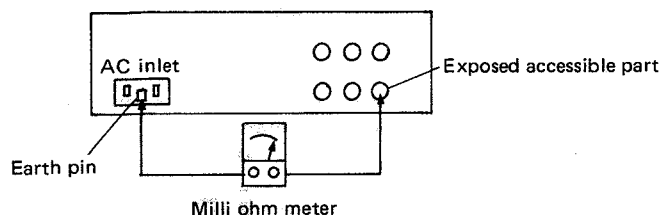


### 5. Grounding (Class I model only)

Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).

**Measuring Method:**

Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.



Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	$Z \leq 0.1 \text{ ohm}$
Europe & Australia	$Z \leq 0.5 \text{ ohm}$

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	$R \geq 1 \text{ M}\Omega / 500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3 \text{ mm}$
100 to 240 V			AC 1.5 kV 1 minute	$d, d' \geq 4 \text{ mm}$
110 to 130 V	USA & Canada	—	AC 900 V 1 minute	$d, d' \geq 3.2 \text{ mm}$
110 to 130 V 200 to 240 V	Europe & Australia	$R \geq 10 \text{ M}\Omega / 500 \text{ V DC}$	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	$d \geq 4 \text{ mm}$ $d' \geq 8 \text{ mm}$ (Power cord) $d' \geq 6 \text{ mm}$ (Primary wire)

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	$1 \text{ k}\Omega$	$i \leq 1 \text{ mA rms}$	Exposed accessible parts
110 to 130 V	USA & Canada	$0.15 \mu\text{F}$ capacitor in series with $1.5 \text{ k}\Omega$	$i \leq 0.5 \text{ mA rms}$	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	$2 \text{ k}\Omega$	$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Antenna earth terminals
		$50 \text{ k}\Omega$	$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Other terminals

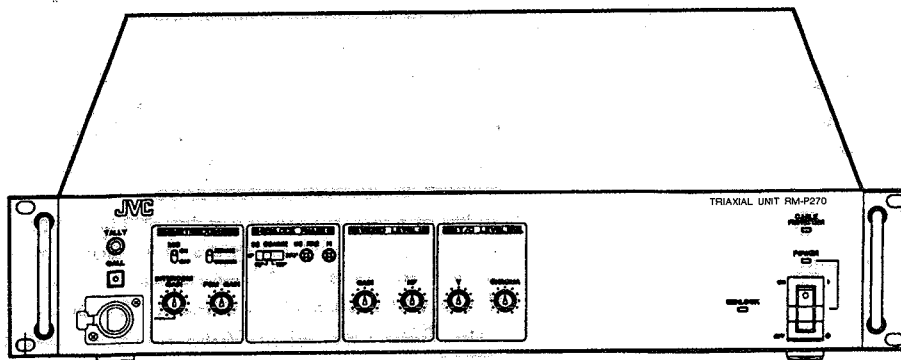
Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

# JVC | Instructions

TRIAxIAL UNIT

**RM-P270**



**For Customer Use :**

Enter below the Serial No. which is located on the rear panel. Retain this information for future reference.

Model No. RM-P270

Serial No. \_\_\_\_\_

Due to design modifications, data given in this instruction book are subject to possible change without prior notice.

#### **WARNING:**

**TO PREVENT FIRE OR SHOCK HAZARD,  
DO NOT EXPOSE THIS APPLIANCE TO  
RAIN OR MOISTURE.**

#### **AVERTISSEMENT:**

**POUR EVITER LES RISQUES D'INCENDIE  
OU D'ELECTROCUTION, NE PAS EXPOSER  
L'APPAREIL A L'HUMIDITE OU A LA PLUIE.**

#### **Warning Notice FOR YOUR SAFETY**

To ensure safe operation the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively grounded through the normal household wiring.

Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth ground. Wrongly wired extension cords are a major cause of fatalities.

The fact that the equipment operates satisfactorily does not imply that the power point is properly grounded and that the installation is completely safe. For your safety, if in any doubt about the correct grounding of the power point, consult a qualified electrician.

#### **WARNING — THIS APPLIANCE MUST BE EARTHED IMPORTANT**

The wires in this mains lead are colored in accordance with the following code:

GREEN-AND-YELLOW:	EARTH
BLUE:	NEUTRAL
BROWN:	LIVE

As the colors of the wires in the mains lead of this apparatus may not correspond with the colored markings identifying the terminals in your plug, proceed as follows. The wire which is colored GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the safety earth symbol  $\perp$  or colored GREEN or GREEN-AND-YELLOW. The wire which is colored BLUE must be connected to the terminal which is marked with the letter N or colored BLACK. The wire which is colored BROWN must be connected to the terminal which is marked with the letter L or colored RED.

#### **CAUTION! CHECK YOUR LINE VOLTAGE.**

Before inserting the power plug, please check this setting to see that it corresponds with the line voltage in your area.

The RM-LP37 or RM-LP35 remote control unit (option) is required to remotely operate the camera controls.

Thank you for purchasing the RM-P270 triaxial unit. Please read this instruction manual carefully to fully utilize the functions of the RM-P270.

- The RM-P270 triaxial unit is designed to remotely operate a KY-27 or KY-19 color video camera when it is used in a studio video system.

#### **Contents**

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#### **FEATURES**

##### **•Can be extended up to 1500 m**

The distance between the camera and triaxial unit can be extended up to 1500 m using cables 14.5 mm in diameter.

##### **•Built-in genlock function**

Genlock operation is possible with a composite video signal (VBS) or black burst signal. The SC phase and H phase can be adjusted with the front controls.

##### **•Camera control by serial data link**

The camera can be enhanced to be controlled by serial data.

#### **PRECAUTIONS**

##### **Safety Precautions**

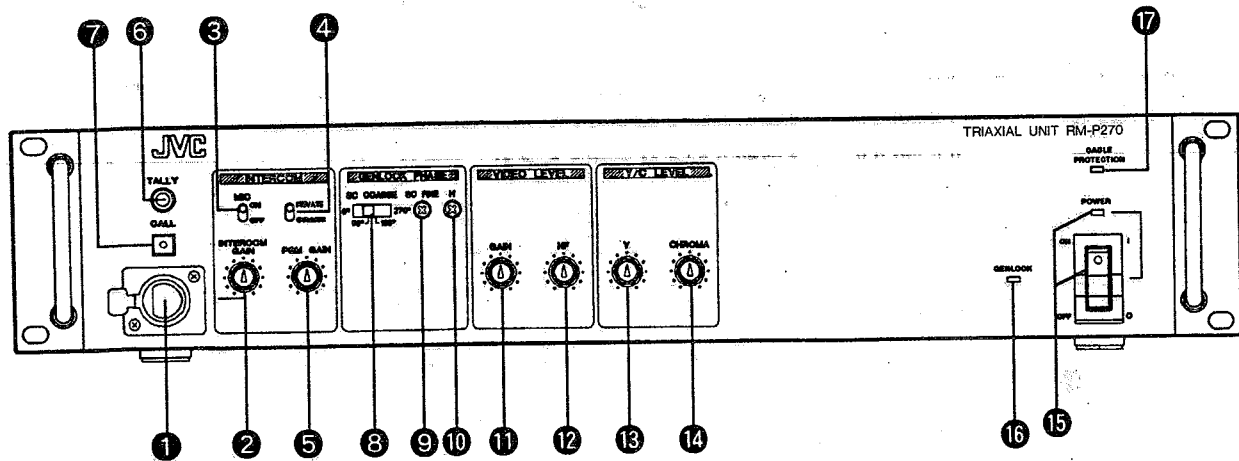
- Use only with the rated power supply.
- Do not modify the unit or operate it with its cover removed.
- Do not allow flammable objects, water or metallic objects to get inside the unit as they could cause damage and malfunctions.
- When not to be used for a long period of time, disconnect the power cord from the power outlet.
- When there is any abnormality (noise, smell, smoke, etc.), immediately switch off, disconnect the power cord from the power outlet, and contact your nearest JVC-authorized service agent.

##### **Handling and storage precautions**

- To extend the unit's service life, avoid using the RM-P270 under the following conditions:
  - in extremely hot, cold or humid places,
  - in dusty places,
  - near appliances generating strong magnetic fields,
  - in places subject to vibrations, and
  - in poorly ventilated places.
- When installing or moving the RM-P270, do not apply violent vibrations and shocks to the unit.
- When the power supply or voltage is too high or too low, the unit's service life may be shortened and it may not achieve its optimum performance.
- When any adjustment of the camera connected drifts to a great extent, the camera's operations may not be performed correctly. Adjust the camera first.
- Use a camera cable specified in this brochure, otherwise there may be incorrect camera cable compensation.

# NAMES AND FUNCTIONS OF MAIN PARTS

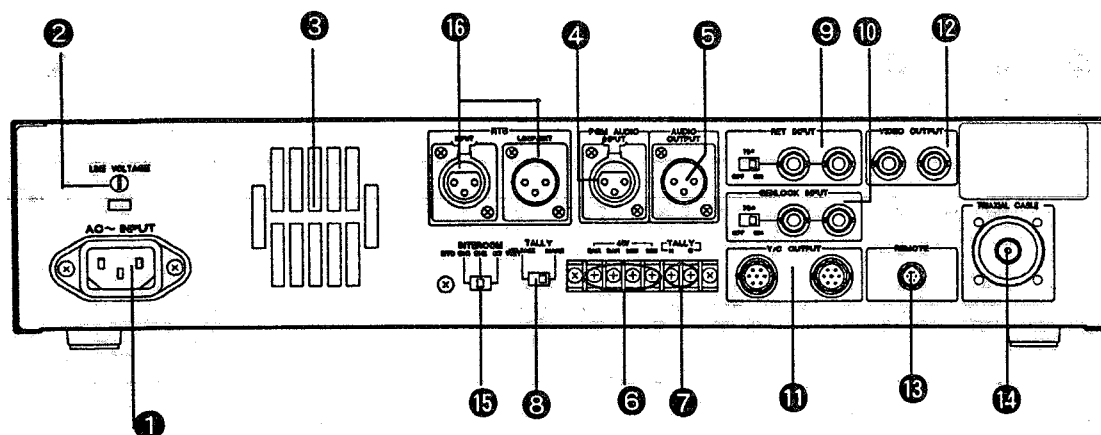
## Base station (front panel)



- ① **Intercom jack**  
Plug intercom headset into this.
- ② **[INTERCOM GAIN] Intercom level control**  
Adjusts the gain of the intercom's earphone.
- ③ **[MIC] MIC ON/OFF switch**  
Use this to switch the headset microphone on and off.
- ④ **Intercom mode selector switch**  
**PRIVATE:** Communication is possible only with the operator of the camera controlled by this.  
**COMMON:** Communication is possible with the whole intercom system.
- ⑤ **[PGM GAIN] Program audio level control**  
It is possible to mix PGM AUDIO signal that is input to the PGM AUDIO INPUT connector on the rear panel with the INTERCOM line. This PGM GAIN control is used for volume control of PROGRAM AUDIO signal in this instance.
- ⑥ **[TALLY] TALLY lamp**  
Lights when a tally signal is present at the TALLY terminals on the rear panel of this unit. Blinks when the call signal is accepted from the camera.
- ⑦ **[CALL] CALL button**  
Use this to call the camera operator without using the intercom.  
When pressed once, the lamp in the button lights and the camera's tally lamp blinks. This lets the camera operator know he or she is being called. When the button is pressed again, the lamp in the button and the tally lamp go out.  
**Note:** If the RM-LP35 is connected to the base station, the CALL button on the base station does not work.
- ⑧ **[SC COARSE] SC phase coarse switch**  
When synchronized connection is made, the SC phase of the reference signal input to the GENLOCK INPUT connector on the rear panel of this unit is compared with the SC phase of the camera's video signal, which can be switched in four steps: 0, 90, 180, and 270 degrees.
- ⑨ **[SC FINE] SC phase fine control**  
The SC phase of the camera's video signal can be adjusted in the range of  $\pm 45^\circ$  by comparing it with the SC phase of the external synchronization reference signal.
- ⑩ **[H] Horizontal phase control**  
The horizontal phase of the camera's video output signal can be adjusted by comparing it with the horizontal phase of the external synchronization reference signal.
- ⑪ **[GAIN] Video level control**  
The output level of the VIDEO OUTPUT connector on the rear panel of this unit can be adjusted.
- ⑫ **[HF] High-frequency component control**  
The high-frequency output component of the VIDEO OUTPUT connector on the rear panel of this unit can be adjusted.
- ⑬ **[Y] Y level control**  
The Y output level of the Y/C OUTPUT connector on the rear panel of this unit can be adjusted.
- ⑭ **[CHROMA] Color level control**  
The color (chroma) output level of the Y/C OUTPUT connector on the rear panel of this unit can be adjusted.
- ⑮ **[POWER] POWER lamp and switch**  
This switch is used to turn the power on and off. The lamp lights when the power is on.
- ⑯ **[GENLOCK] Genlock operation lamp**  
Lights when a synchronizing signal is input to the GENLOCK connector the rear panel of this unit.
- ⑰ **[CABLE PROTECTION] Cable protection lamp**  
Blinks when no cable is connected between the unit and the camera.



## Base station (rear panel)



### ① [AC ~INPUT] AC INPUT connector

Supply power at the rated voltage using the AC power cord provided.

### ② [LINE VOLTAGE] LINE VOLTAGE selector

Be sure to set the switch to correspond to your local voltage; if it is set incorrectly, normal operation will not be possible and internal components may sometimes be damaged.

### ③ Fan ventilation hole

Ventilation hole containing cooling fan. There must be sufficient space behind this hole.

### ④ [PGM AUDIO INPUT] Program audio input connector

This input connector is used to mix the program audio signal into the intercom line.

### ⑤ [AUDIO OUTPUT] Microphone output connector

This outputs the audio signal of the microphone connected to the camera.

### ⑥ [4W] Intercom connector

The intercom is connected to this connector. Refer to "Intercom functions" on page 6.

### ⑦ [TALLY] TALLY terminals

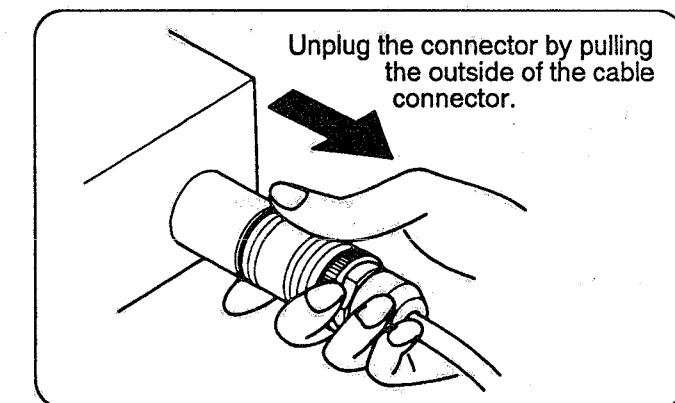
Apply a tally signal from a special effects generator (SEG) or a switcher. Refer to "Tally input" on page 6.

### ⑧ [TALLY] TALLY select switch

Select a signal supplied to the tally circuit. Refer to "Tally input" on page 6.

### ⑨ [RET INPUT] Return video signal input connector

The return video signal from a special effects generator or switcher can be input via these connectors to be supplied to the viewfinder. When a bridging connection is not required, set the 75  $\Omega$  termination switch to ON.



### ⑩ [GENLOCK INPUT]

#### External synchronizing signal input connectors

A composite video signal (VBS) or black burst (BB) signal can be input through these connectors as the reference signal for genlocking. When a bridging connection is not required, set the 75  $\Omega$  termination switch to ON.

### ⑪ [Y/C OUTPUT] Y/C signal output connector

Outputs the Y/C signal for two S-VHS channels.

### ⑫ [VIDEO OUTPUT] Video signal output connector

Outputs the VBS signal for two output connector channels.

### ⑬ [REMOTE] Remote connector

This connector is used for an optional remote control unit RM-LP37 or RM-LP35.

### ⑭ [TRIAxIAL CABLE] TRIAXIAL connector

Connect this unit to the camera using this triaxial connector.

<U-Ver. only>

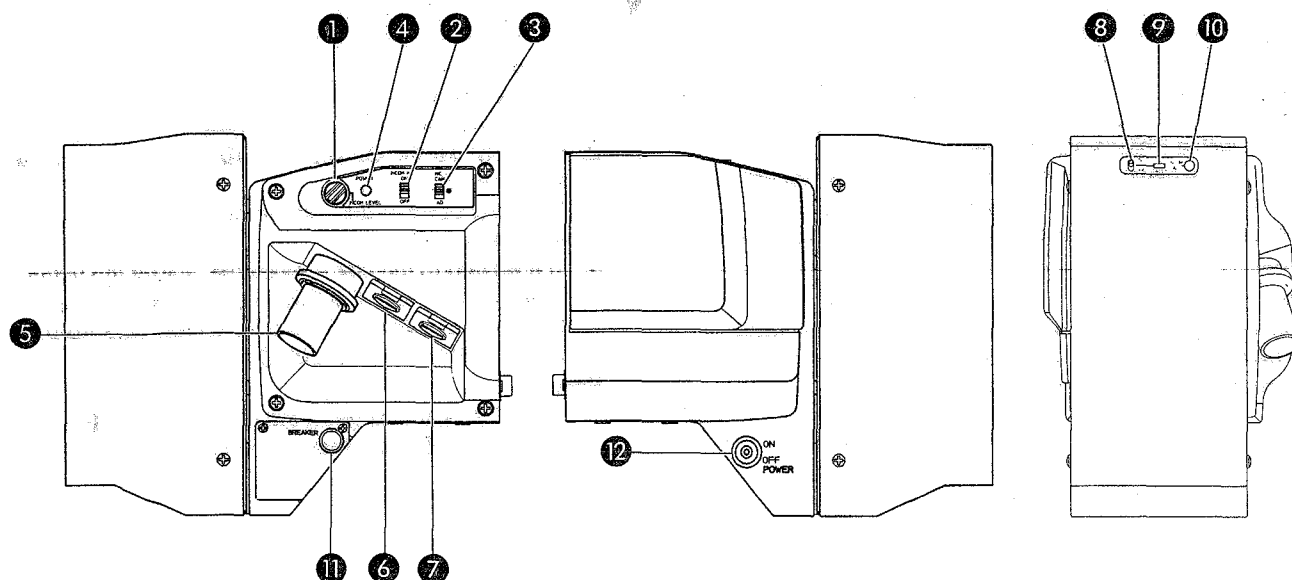
### ⑮ [INTERCOM] Intercom select switch

Select an intercom system.

### ⑯ [RTS] RTS input connector

Use this when connecting the unit to an RTS intercom system. Bridge connection is possible.

## Triaxial Adapter



### ① [INCOM LEVEL] Intercom (talkback) level control

Turn this control clockwise to increase the volume and turn this control counter clockwise to decrease the volume.

### ② [INCOM MIC] Intercom (talkback) microphone switch

Turns the microphone line of the headset on and off.

### ③ [MIC] Microphone switch

Selects either the camera or adapter for the microphone line.

### ④ [POWER] Power lamp

Lights when power is supplied to the camera and the OPERATE switch on the camera is on.

### ⑤ [TRIAx] Triaxial cable connector

Connect the triaxial cable to this to connect the base station.

### ⑥ [INTERCOM] Intercom (talkback) connector

Connect the intercom (talkback) headset to this. The microphone line of the intercom headset can be switched on and off with the camera head INCOM MIC switch.

### ⑦ [MIC INPUT] Microphone input connector

Connector for microphone input.

### ⑧ [TALLY] Tally switch

Used to switch the back tally lamp on and off.

### ⑨ [TALLY] Back tally lamp

Lights when the tally signal is supplied to the TALLY connector on the rear of the base station. Blinks when the CALL button on the base station is pressed. The back tally lamp is interlocked with the tally of the camera viewfinder.

### ⑩ [CALL] Call button

Pressing this button makes the TALLY lamp on the base station blink.

### ⑪ [BREAKER] Breaker

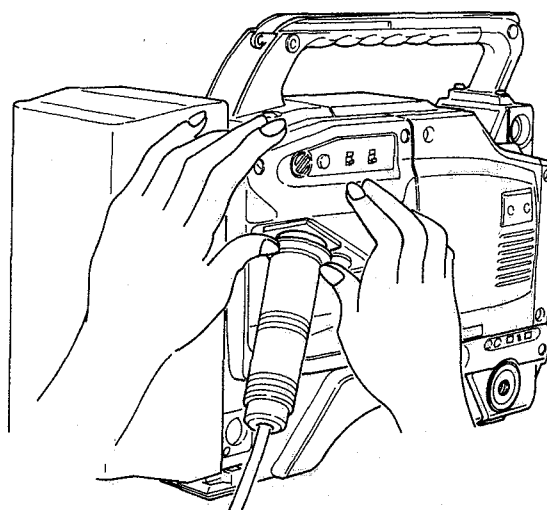
If an overcurrent flows through the main unit, this circuit breaker trips to protect the internal circuits. When this button is pressed, the unit is reset and the power can be turned on again.

*Note: Reset only after eliminating the cause of the breaker tripping. If the breaker trips frequently, contact your nearest JVC service station.*

### ⑫ [POWER] Power switch

When the power switch is on, power is supplied to the camera head. When this switch is off, the power is cut.

To unplug the connector, pull the cable connector downwards, while pushing the flange of the receptacle.



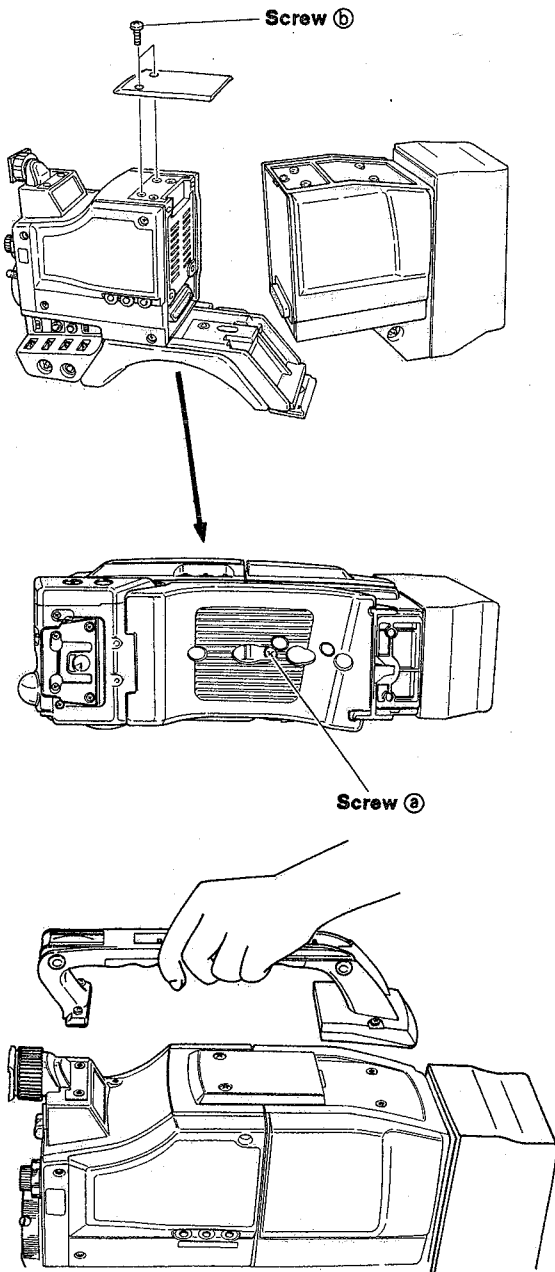
# PREPARATION FOR USE

## ■ Mounting the adaptor

- 1) Mount the adaptor on the back of the camera fitting the 50-pin connector into the socket as shown in the figure below.
- 2) Secure the adaptor with the screw (a), turning it clockwise with a Phillips screwdriver.
- 3) Mount the plate from above the camera, and secure it by turning the screw (b) clockwise.
- 4) Attach the supplied handle on the camera with the four screws.

### Note:

After the adaptor is mounted, mount the lens, viewfinder, microphone, etc. on the camera as described in the camera's instructions.



## ■ Video signal adjustment

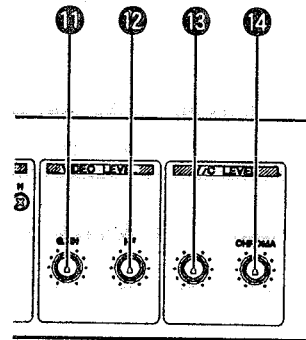
When equipment is connected, the signal level must be adjusted.

Adjust it as follows:

1. Set the camera to the BARS mode.
2. Normally, set the GAIN control (1) and HF control (2) at the center.  
The level can be varied in the range - 10% to +10% with these controls.
3. If a waveform monitor is available, adjust the video level to 1 Vp-p with the GAIN control (1). Adjust the burst level to 0.286 Vp-p for U-Ver. (0.3 Vp-p for E-Ver.) with the HF control (2).

### Note:

The SC phase changes if the GAIN control (1) or HF control (2) is operated during synchronous connection.



## ■ Y/C level adjustment

1. Set the camera to the BARS mode.
2. Normally, set the Y control (3) and CHROMA control (4) at the center.  
The level can be varied in the range - 10% to +10% with these controls.
3. If a waveform monitor is available, adjust the video level to 1 Vp-p with the Y control (3). Adjust the burst level to 0.286 Vp-p for U-Ver. (0.3 Vp-p for E-Ver.) with the CHROMA control (4).

## ■ Adjustment during genlock connection

This section explains an example of genlock connection for this unit using an SEG (special effects generator) as the main signal source. Connect this unit, the camera, and the SEG according to the description in the CONNECTION section. (See pages 7 and 8.)

- 1) Select BAR on the camera and output the color bar signal.
- 2) Select the color bars signal of the SEG as the SEG's program output.  
(See to the SEG's instruction manual.)

### Horizontal phase adjustment

- 3) While monitoring the SEG's programmed output, alternately switch the SEG's color bar signal and the RM-P270 color bar signal on the program bus. Adjust using the H control ⑩, so that the horizontal phases of the color bars of both the SEG and the RM-P270 do not move.

### Chroma phase adjustment

For chroma phase adjustment, using the same procedure as for horizontal phase adjustment, adjust so that the chroma phases of the color bar signals of the RM-P270 and the SEG match.

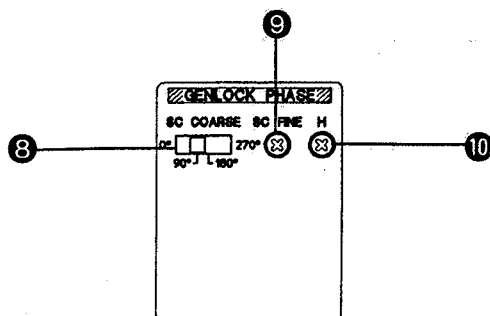
- 4) Use the SC COARSE switch ⑧ for coarse adjustment.  
(0, 90, 180, 270 degrees)

### SC fine adjustment

- 5) Rotate the SC FINE control ⑨ with a Phillips screwdriver for fine adjustment. It can be adjusted within  $\pm 45$  degrees.

#### Notes:

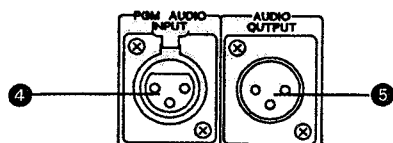
- Use a vectorscope or waveform monitor for more accurate adjustment.
- To synchronize with the playback signal from a VCR, use a TBC.
- When a monitor is used, use an under-scan monitor.
- If a signal is input to RET INPUT during genlock connection, use a synchronized RET signal.



## ■ Audio signals

When a microphone is connected to the KY-27/KY-19, the audio signal from the microphone is output from the AUDIO OUTPUT connector ⑤ on the rear panel of the RM-P270 through the triaxial cable.

The amount of program audio signal (supplied to PGM AUDIO INPUT ④ on the rear panel of the RM-P270) to be mixed in to the intercom line can be adjusted with PGM GAIN ⑤ on the front panel.



## ■ Intercom functions

In a system that uses several cameras and remote control units, two-way communication is necessary between operators.

Configure the intercom system as follows:

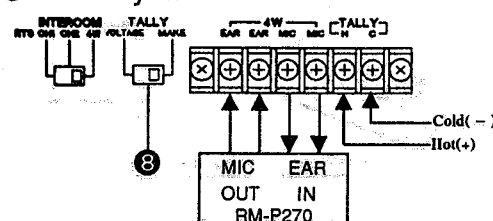
- The intercom system of the RM-P270 is a 4-wire system or RTS system (U-Ver. only).
- There are intercom jacks on the front panel of the RM-P270.
- Use a headset rated at 200 to 600  $\Omega$  /1kHz.  
Recommended headset: JVC KA-310 (optional)  
(microphone: 50  $\Omega$  /DC; earphone: 200  $\Omega$  /1kHz)
- There are two communication modes.

PRIVATE: Set to this mode when communicating with the camera connected to the RM-P270.

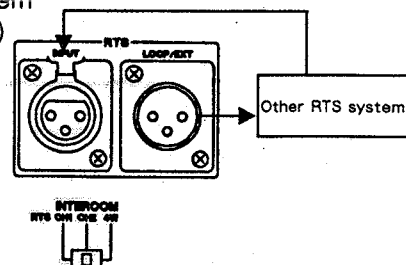
COMMON: Set to this mode when communicating with the entire intercom system.

- Use the GAIN ② control to increase and decrease the volume of the earphones in the intercom connected to the RM-P270.

### ● 4-wire system



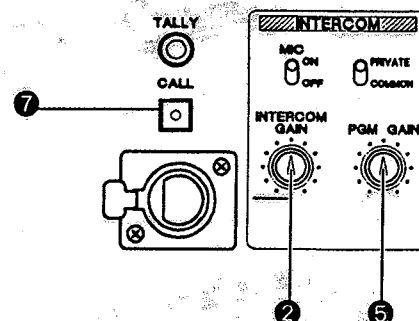
### ● RTS system (U-Ver. only)



## ■ Cameraman call function

This function is used to call the camera operator without using intercom. When the call button ⑦ is pressed, the lamp in the call button lights and the tally lamp on the camera blinks.

When the button is pressed again, the lamp on the camera goes off.



## ■ Tally input

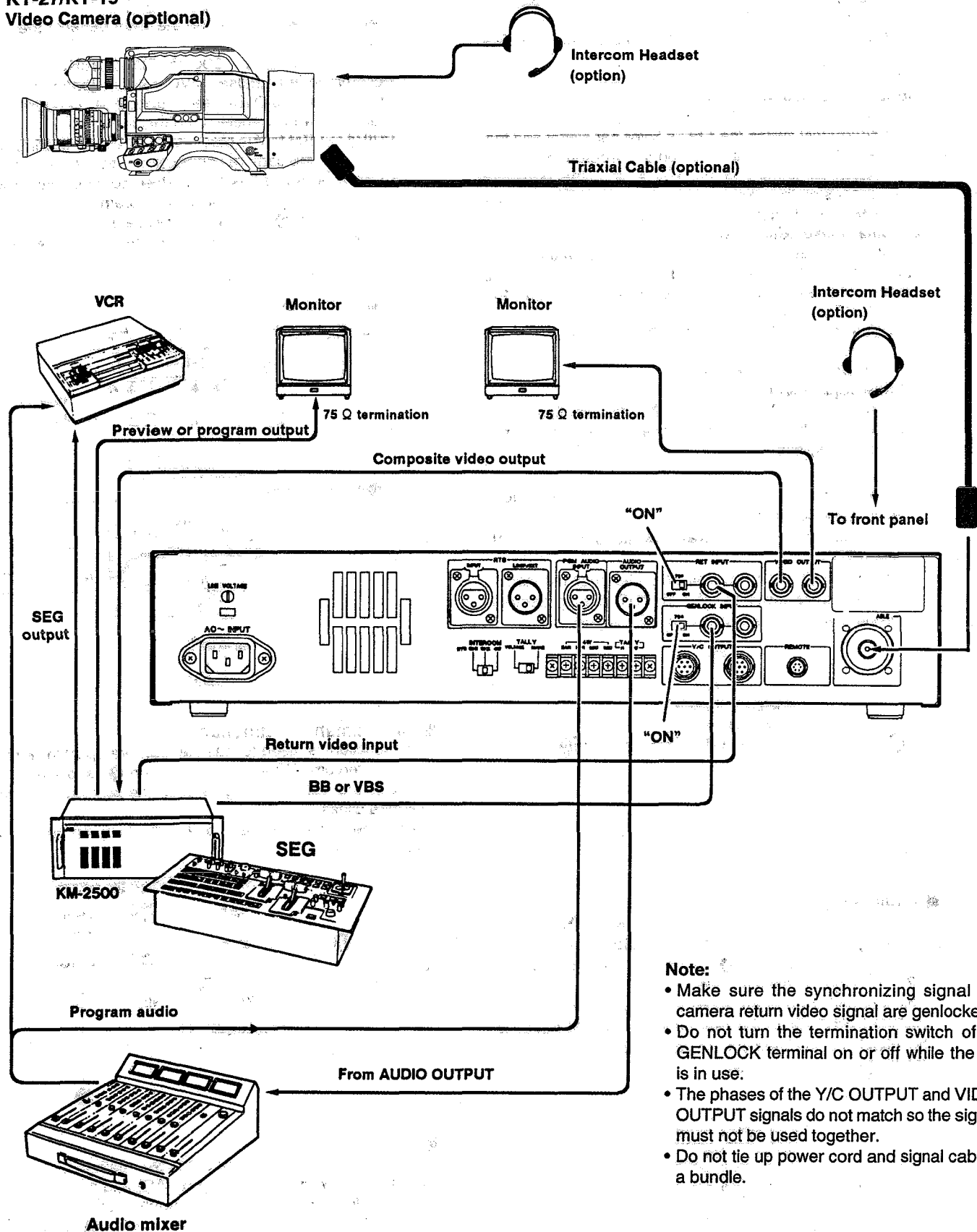
The tally circuit can use one of the two methods: voltage supply (5 to 24 VDC or 6 VAC) and contact supply. It is factory-set to the voltage supply system, but can be changed to contact supply with the switch ③ on the rear panel of the RM-P270.



# CONNECTIONS

## WHEN THE RM-P270 IS USED TO CONTROL THE KY-27/KY-19 VIDEO CAMERA

KY-27/KY-19  
Video Camera (optional)

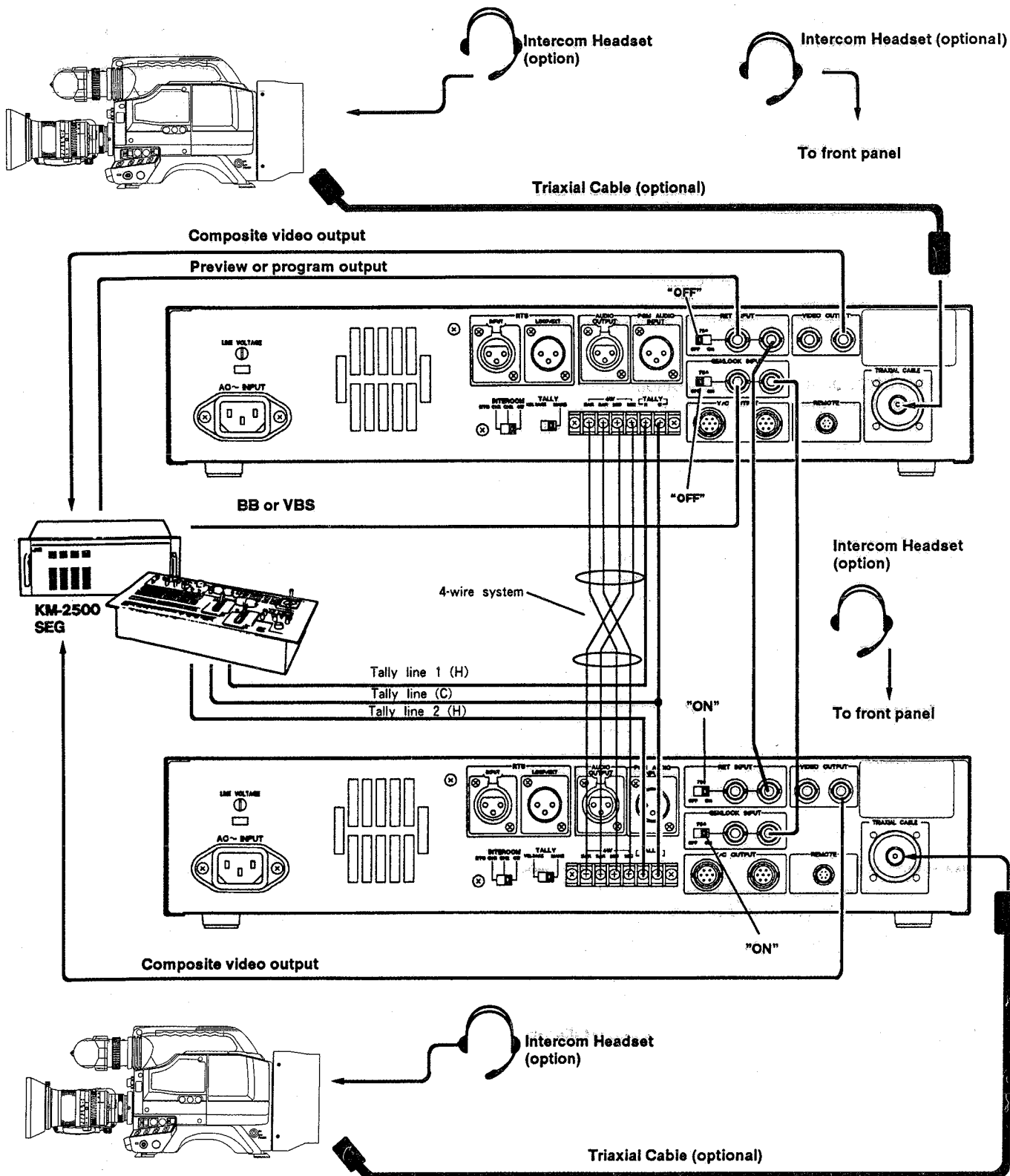


### Note:

- Make sure the synchronizing signal and camera return video signal are genlocked.
- Do not turn the termination switch of the GENLOCK terminal on or off while the unit is in use.
- The phases of the Y/C OUTPUT and VIDEO OUTPUT signals do not match so the signals must not be used together.
- Do not tie up power cord and signal cable in a bundle.

# WHEN TWO RM-P270s ARE USED TO CONTROL TWO CAMERAS WITH TALLY AND INTERCOM LINES

KY-27/KY-19  
Video Camera (optional)



KY-27/KY-19  
Video Camera (optional)

Use of three or more units  
If three or more units are used, a mixing amplifier is required to use the intercom function.

## TROUBLESHOOTING

◆ **The unit doesn't work when the control buttons are pressed.**

- Is the cable protection lamp on?
- Are the cables, etc., connected correctly?
- Are the power switches of the RM-P270, the camera adapter and the camera set to ON?

◆ **The tally lamp doesn't light.**

- Is power (6 VAC or 5 to 24 VDC) being supplied to the tally input connector?
- Is the tally method (voltage supply or contact supply) suited to the system?

◆ **The intercom function cannot be used.**

- Is the impedance of the headset correct?
- Is the MIC switch on the camera body set to OFF?

◆ **Noise is heard on the Microphone output connector.**

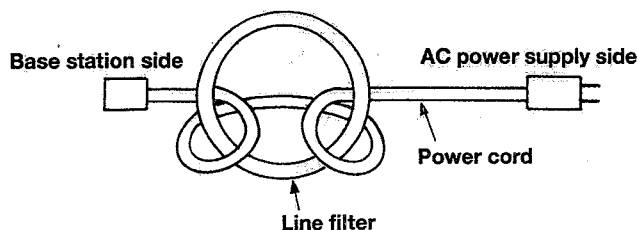
- When the power is turned on again, noise may be heard on the Microphone output connector, but this is not a malfunction.
- Is the power to the camera off?

◆ **Sync cannot be obtained.**

- Is a black burst signal or composite video signal being supplied to the GENLOCK connector?
- Is the output signal from a VTR being supplied directly without using a TBC?
- Is the RET signal synchronized?

◆ **Signals are sometimes not synchronized.**

- Noise may be affecting the power supply. Pass the supplied power cord (provided) through the line filter (SS47003) near the power input connector of the cord by winding it two turns around the filter.



◆ **The video signal output terminal is affected by the RET signal.**

- Is the camera supply of off?

## TRIAxIAL CABLE

There are two types of triaxial cable.

Select one of them as required.

Examples of cables made by Fujikura Densen

4.8/1.0 EFTXF: 8.6 mm in diameter

9.6/2.22 EFTXF: 14.5 mm in diameter

**Specifications and design are subject to change without notice.**

**Composite video signal** : 1Vp-p, 75 Ω x2  
**Y/C signal** : Y ; 1Vp-p(including SYNC)75 Ω  
                   C ; U-ver. ---- 0.286Vp-p(burst level)75 Ω x2  
                   E-ver. ---- 0.3Vp-p(burst level)75 Ω x2  
**Intercom** : 4-wire system; 0 dB, 600 Ω balanced  
                   RTS system (U-ver. only) ; -10dB,200 Ω unbalanced  
**Audio signal** : -20 dBm, 600 Ω

<b>External sync signal</b>	: Composite video signal 1 Vp-p, 75 Ω (bridge connectable) or black burst 0.43 Vp-p for U-ver.(0.45 Vp-p for E-ver. )
<b>RET signal</b>	: Composite video signal or VS 1 Vp-p, 75 Ω x 2 (bridge connectable)
<b>Intercom</b>	: 4-wires system; 0 dB, 600 Ω RTS system (U-ver. only) ; - 10dB, 200 Ω unbalanced
<b>Program audio</b>	: - 4dB, 600 Ω , unbalanced
<b>Tally</b>	: Contact supply or power supply (5- 24 VDC or 6 VAC)
<b>MIC input</b>	: -60 dBm, 600 Ω balanced

<b>Input voltage</b>	: U-ver.; 120VAC, 60 Hz    E-ver.; 240V/230VAC, 50/60 Hz
<b>Power consumption</b>	: 68 W (including camera with VF-P550B)
<b>Weight</b>	: Base station; 10.2 kg; Camera adaptor: 2.5 kg (with handle and top cover)
<b>Ambient temperature</b>	: 0°C to +40°C

Power cord (U-ver:QMP9003-022, E-ver:QMP4908-250)	x 1	Handle	x 1
Extension PC board (SCK1089-03-00A)	x 1	Top Cover	x 1
Line Filter(SS47003)	x 1	Screw (SDSP4008M)	x 2
RF Cable(SCV2211-001)	x 1		
Instruction manual	x 1		

• Base station

4-6.5 × 9.8male

6-M4 (both side)

TRIAL UNIT RA-3720

76 88 93 6 44

370 430 465 482

3 56.6 111.1 114.3 340 400 455.3 (318)

235





**RM-P270**

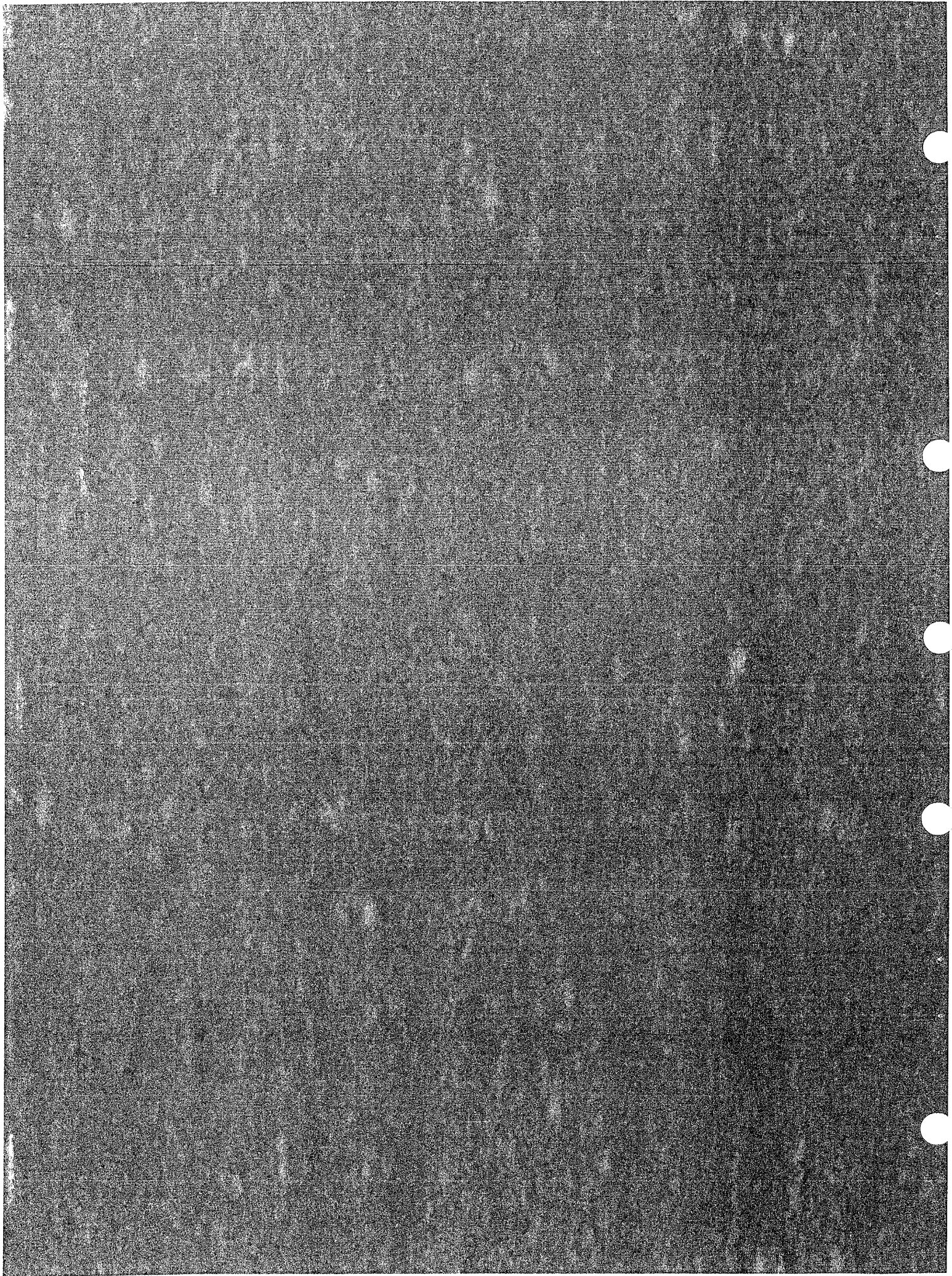
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# **BASE STATION SECTION**

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Since the base station of the RM-P270 is the same as that of the RM-P350 except some of mechanism parts, no mention of the base station appears in this service manual except some of mechanism parts different from those of the RM-P350.  
Such being the case, please read this service manual together with the service manual No. 60079 for the RM-P350.



## SECTION 1 SERVICE CAUTIONS AND DISASSEMBLY

- Refer to the service manual No. 60079 for the RM-P350.

## SECTION 2 ELECTRICAL ADJUSTMENTS

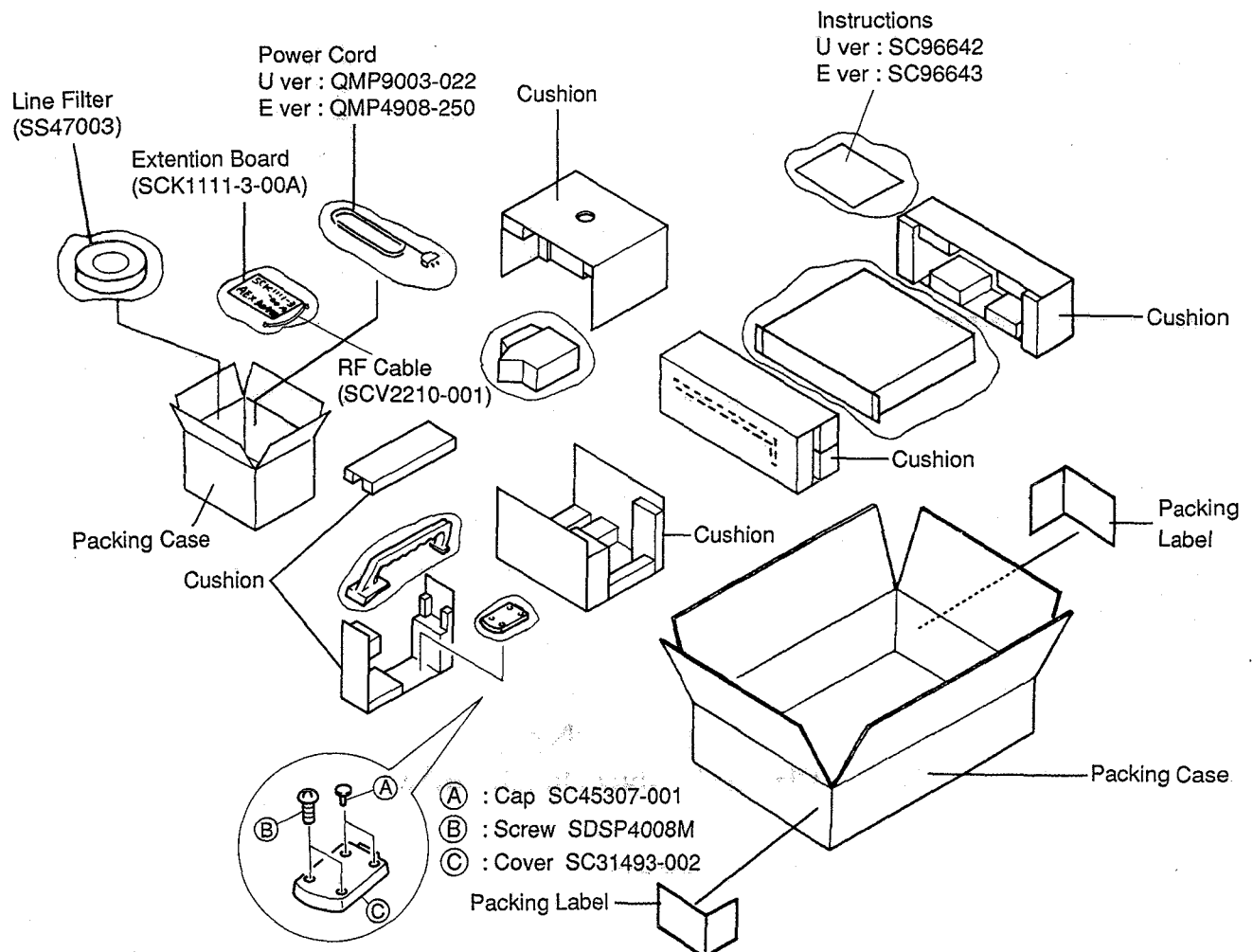
Electrical adjustment procedure of the RM-P270 is mostly the same as that of the RM-P350.

Namely, the adjustment procedure of the RM-P270's base station section is entirely the same as that of the RM-P350.

In regard of the camera adapter section, there is only the item different between the two models. That is, "Subsection 2.7 RET VIDEO RECEPTION, Item No. 2, RF level det." (Service Manual No. 60079 for RM-P350), which is needed for the RM-P350 only.

**For electrical adjustment of the RM-P270, it is required to prepare the KY-27 or the KY-19 video camera.**

## SECTION 3 REPACKING



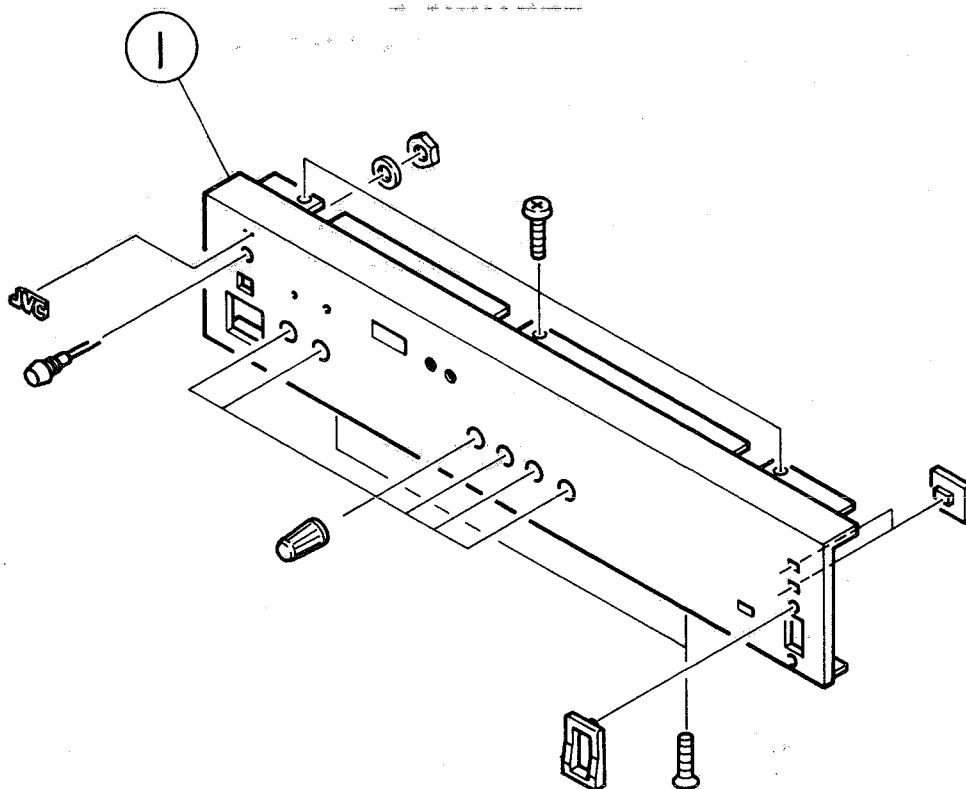
**Note:** Accessories above are subject to change without notice.



## SECTION 4 EXPLODED VIEWS AND PARTS LIST

### 4.1 BASE STATION ASSEMBLY

- This section mentions only the parts different from those used in the RM-P350.  
For other parts, refer to the service manual (No. 60079) for the RM-P350.



#### ● BASE STATION Assembly list M 1

M 1 M M        

Symbol No.	Part No.	Part Name	Description
1	SC10129-061	FRONT PANEL	

## SECTION 5 CHARTS AND DIAGRAMS

- Refer to the service manual No. 60079 for the RM-P350.

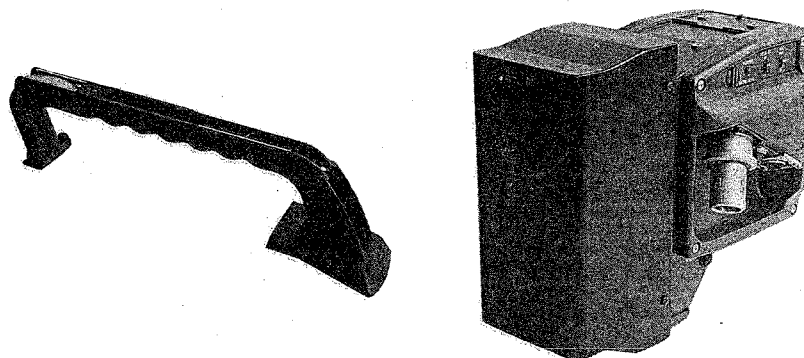
No. 60086

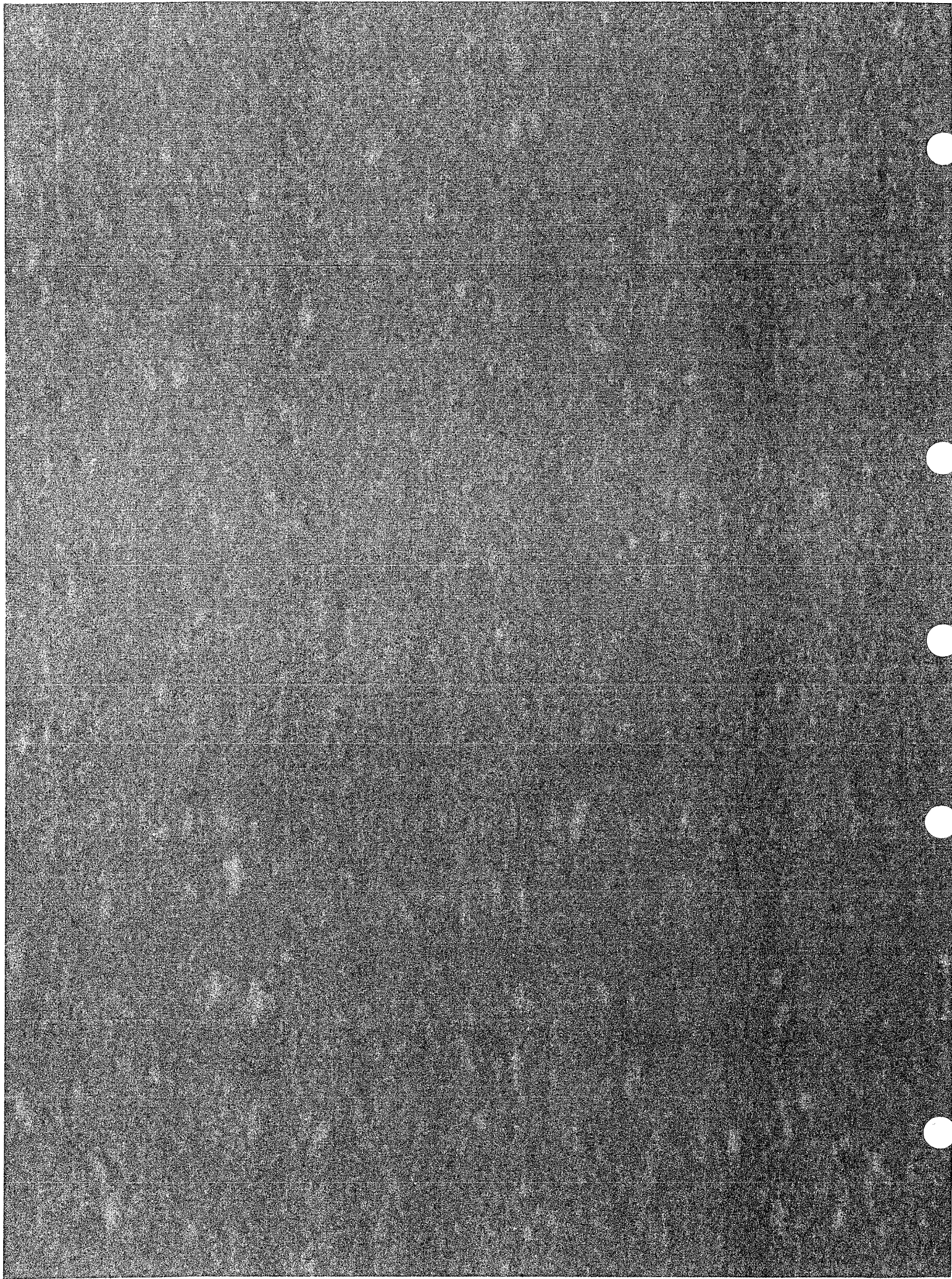
**RM-P270**

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# **CAMERA ADAPTER SECTION**

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## SECTION 1 SERVICE CAUTIONS AND DISASSEMBLY

### 1.1 RESET OF POWER BREAKER

This model protects circuits from overcurrent not with power fuse but with the power breaker. When the breaker was once activated, reset it to reconnect the power line.

**Note:** Before resetting the power breaker, make sure to investigate the reason why it was activated and to remove the cause first in order to prevent the trouble from spreading.

1. Turn off all the power switches of the camera and the base station.
2. The power breaker ① is provided on the right side of the set. Pressing the breaker button reconnects the power line.

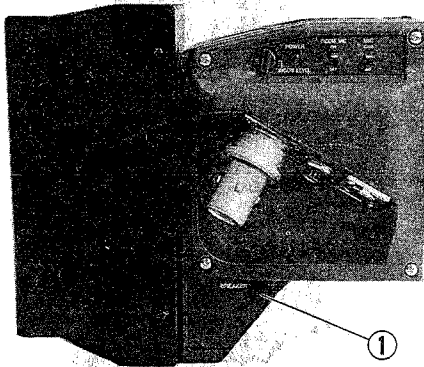


Fig. 1-1

### 1.2 SEPARATION FROM CAMERA

For separation of this set from the camera, refer to the section "Installation of the adapter" in the instructions of the RM-P270.

### 1.3 REMOVAL OF THE REAR BOX COVER

1. Remove four screws ② and the cover can be removed.

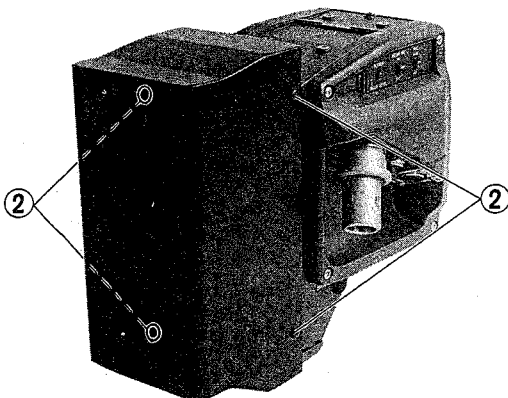


Fig. 1-2

### 1.4 REMOVAL OF PLUG-IN BOARDS (RGD/CMM/AUS/INP BOARD)

1. For disconnecting plug-in boards except the RGD board, hold the upper and lower sides of a board while pull it toward you.
  2. For disconnecting the RGD board, disconnect all the other boards first, then disconnect it.
- When reconnecting the boards, be careful not to apply excessive force to the connector sections.
  - Since the connectors of the coaxial cable connected with the board are colored discriminatively from each other, refer to the following colorings for reconnection.

RGD : Brown	AUS : Orange
CMM : Red	INP : Yellow

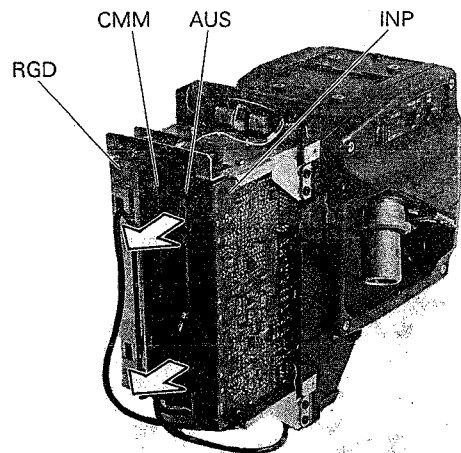


Fig. 1-3

### 1.5 REMOVAL OF SIDE COVER

1. Remove four screws ③ and the left side cover assembly can be removed.

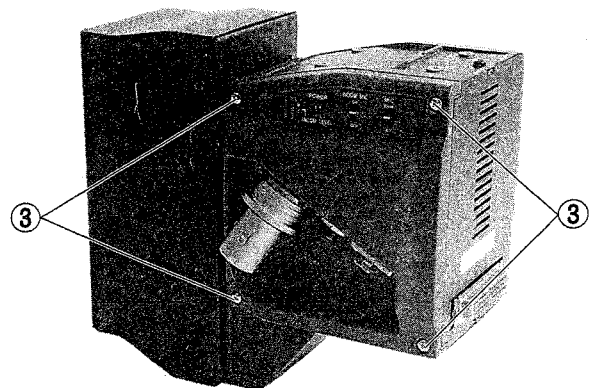


Fig. 1-4



## 1.6 REMOVAL OF PSA BOARD

1. Remove two screws ④ and one screw ⑤, then shield cover can be removed.

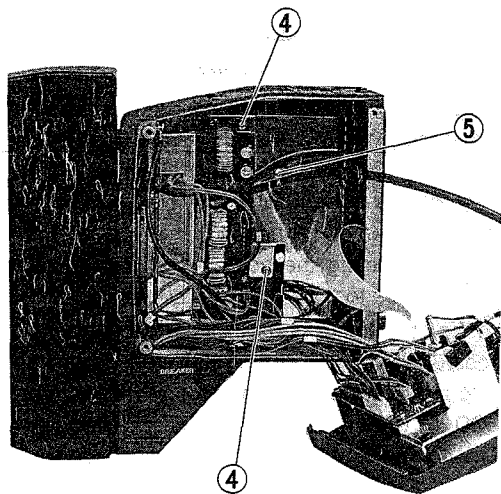


Fig. 1-5

2. Remove two studs ⑥ and the PSA board can be removed.

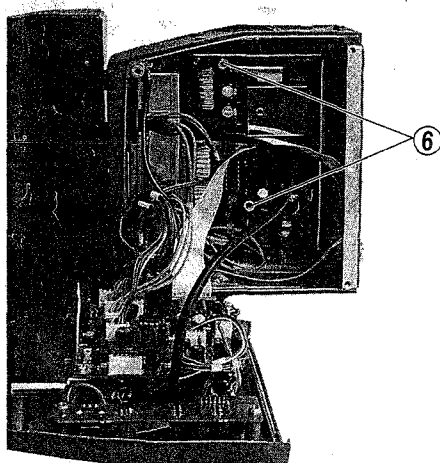


Fig. 1-6

## 1.7 REMOVAL OF ASP BOARD

1. Remove all plug-in boards to the previous subsection 1.4.
2. Remove four screws ⑦ and the rear bracket with MT board.

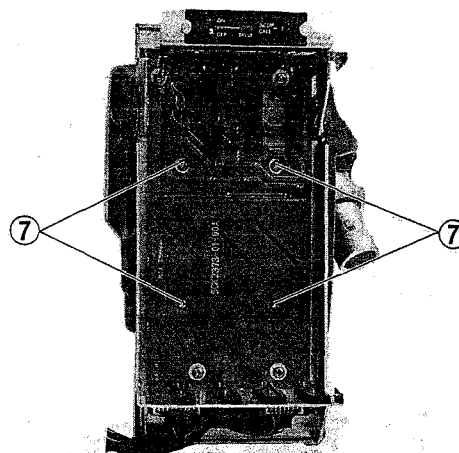


Fig. 1-7

3. Remove two screws ⑧.

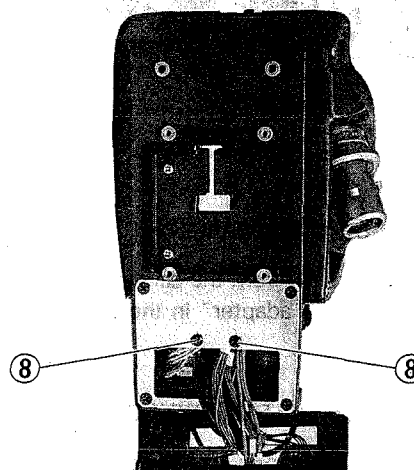


Fig. 1-8

4. Remove PSA board to the previous subsection 1.6.
5. Remove two screws ⑨ and the panel.

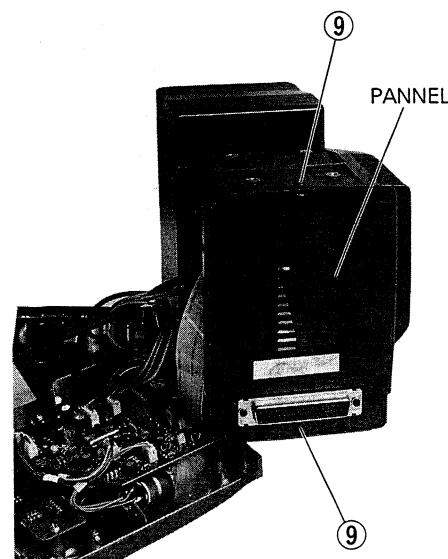


Fig. 1-9

6. Remove two screws ⑩, then APS board can be remove.

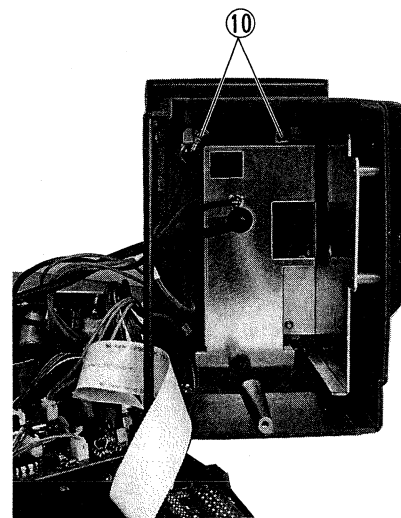


Fig. 1-10

## 1.8 REMOVAL OF ADB BOARD

1. Remove the left side cover assembly to the previous subsection 1.5.
2. Remove one screw ⑪ and two screws ⑫, then ADB board can be remove with the bracket.

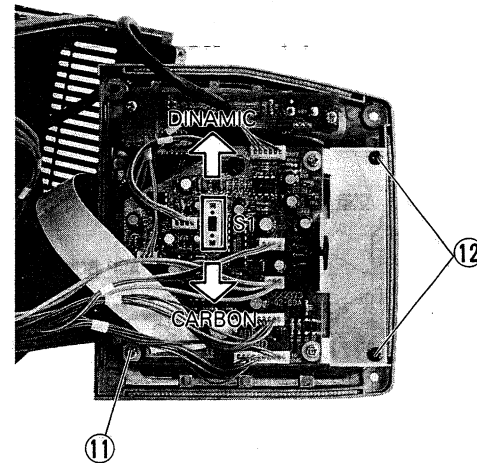


Fig. 1-11

## 1.9 FUNCTION OF INTERNAL SWITCH

- ON ADB board

There is an intercom microphone selector switch on the ADB board. Set it to the carbon or dynamic mic position according to the type of a microphone to be used. Location of the switch is shown in Fig. 1-11.

U version:

This switch is initially set to the dynamic side at shipment.

E version:

This switch is initially set to the carbon side at shipment.

## SECTION 2 ELECTRICAL ADJUSTMENT

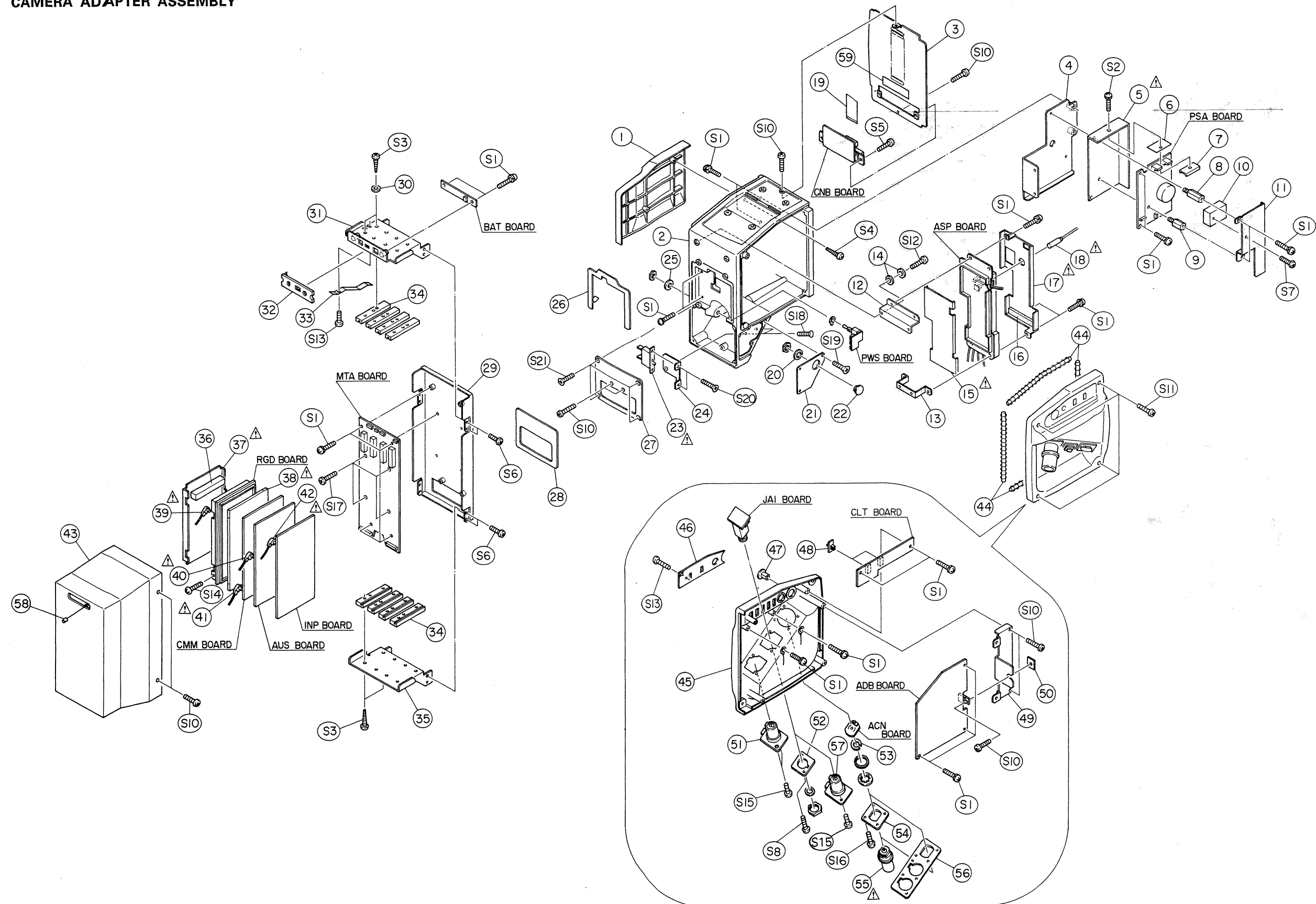
- Refer to the Section 2 "ELECTRICAL ADJUSTMENT" of the Base Station.

## SECTION 3 REPACKING

- Refer to the Section 3 "REPACKING" of the Base Station.

## SECTION 4 EXPLODED VIEW AND PARTS LIST

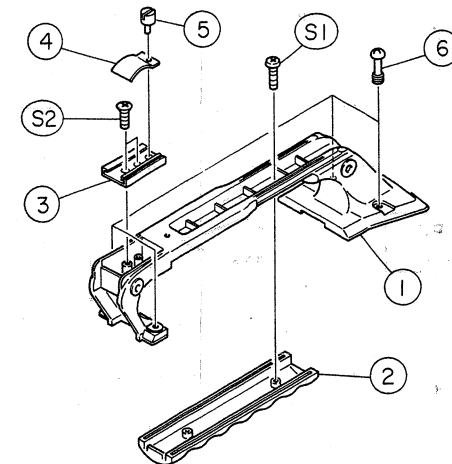
### 4.1 CAMERA ADAPTER ASSEMBLY



● **ADAPTER** Assembly list **M** **2**

Symbol No.	Part No.	Part Name	Description
1	SC20471-001	PAD	
2	SC10144-004	AD FRAME	
3	SC31494-003	FRONT PANEL	
4	SC31774-001	PS BRACKET	
5	SC31389-001	PU PLATE	
6	SC44705-001	HOLDER	
7	SC44689-001	BRACKET	
8	SS44144-028	STUD(SN-19)	
9	SS44144-022	STUD	
10	SC45546-001	SHIELD CASE	
11	SC45547-011	SHIELD COVER	
12	SC45503-001	SP BRACKET(1)	
13	SC45504-001	SP BRACKET(2)	
14	WNS4000N	WASHER	
15	SC31511-001	SHIELD COVER	
16	SC42610-002	CUSHION	
17	SC31513-001	SHIELD COVER	
18	SCV2211-002	CABLE	
19	SCV2098-2018K	FFC CABLE	
21	SC45510-011	CN PLATE	
22	SC44693-001	RUBBER CAP	
23	SCV1895-315	BREAKER	
24	SC45507-001	BR BRACKET	
25	QO3091-202	WASHER	
26	SC45138-001	CUSHION	
27	SC45509-001	REAR PLATE	
28	SC45454-001	CUSHION	
29	SC20530-001	REAR BASE	
30	SS49917-002	SPACER	
31	SC31750-001	TOP BRACKET	
32	SC45453-001	REAR PANEL	
33	SC45150-001	PLATE	
34	SC44507-001	PS RAIL	
35	SC31751-001	BOTTOM BRACKET	
36	SC42610-002	CUSHION	
37	SC31505-001	SHIELD COVER	
38	SC31508-001	SHIELD COVER	
39	SCV2210-103	RF CABLE	RGD (BRN)
40	SCV2210-301	CABLE	AUS (ORG)
41	SCV2210-203	RF CABLE	CMM (RED)
42	SCV2210-401	CABLE	INP (YEL)
43	SC20531-001	REAR COVER	
44	SC44847-090	SHIELD TUBE	
45	SC10145-006	L.SIDE COVER	
46	SC45508-002	NAME PLATE	
47	SC45134-001	KNOB	
48	SC45116-001	KNOB	
49	SC45505-001	ADB BRACKET	
50	SC44899-001	NUT	
51	SCV0316-03S	CONNECTOR	
52	Not used		
53	SC45304-001	SPACER	
54	Not used		
55	SCV1160-001	TR CONNECTOR	
56	SC45583-001	CN PLATE	

Symbol No.	Part No.	Part Name	Description
57	SCV2393-001	CONNECTOR	
58	SCV2402-001	BUTTON	
59	—	SERIAL NO. PLATE	
S1	LPSP3006Z	SCREW	M3×6
S2	LPSP3012Z	SCREW	M3×12
S3	SDSA2606Z	SCREW	M2.6×6
S4	SDSF3008M	SCREW	M3×8
S5	SDSP2008M	SCREW	M2×8
S6	SDSP2604M	SCREW	M2.6×4
S7	SDSP2604R	SCREW	M2.6×4
S8	Not used		
S10	SDSP3006M	SCREW	M3×6
S11	SDSP3006N	SCREW	M3×6
S12	SDSP4006M	SCREW	M4×6
S13	SPSK2030M	SCREW	M2×3
S14	SPSK2640N	SCREW	M2.6×4
S15	SPSP2610N	SCREW	M2.6×10
S16	SPSP3006M	SCREW	M3×6
S17	SPSP3006N	SCREW	M3×6
S18	SSSP2604M	SCREW	M2.6×4
S19	SSSP2606M	SCREW	M2.6×6
S20	SSSP3004N	SCREW	M3×4
S21	SSSP3006M	SCREW	M3×6



- **HANDLE** Assembly list **M** **3**

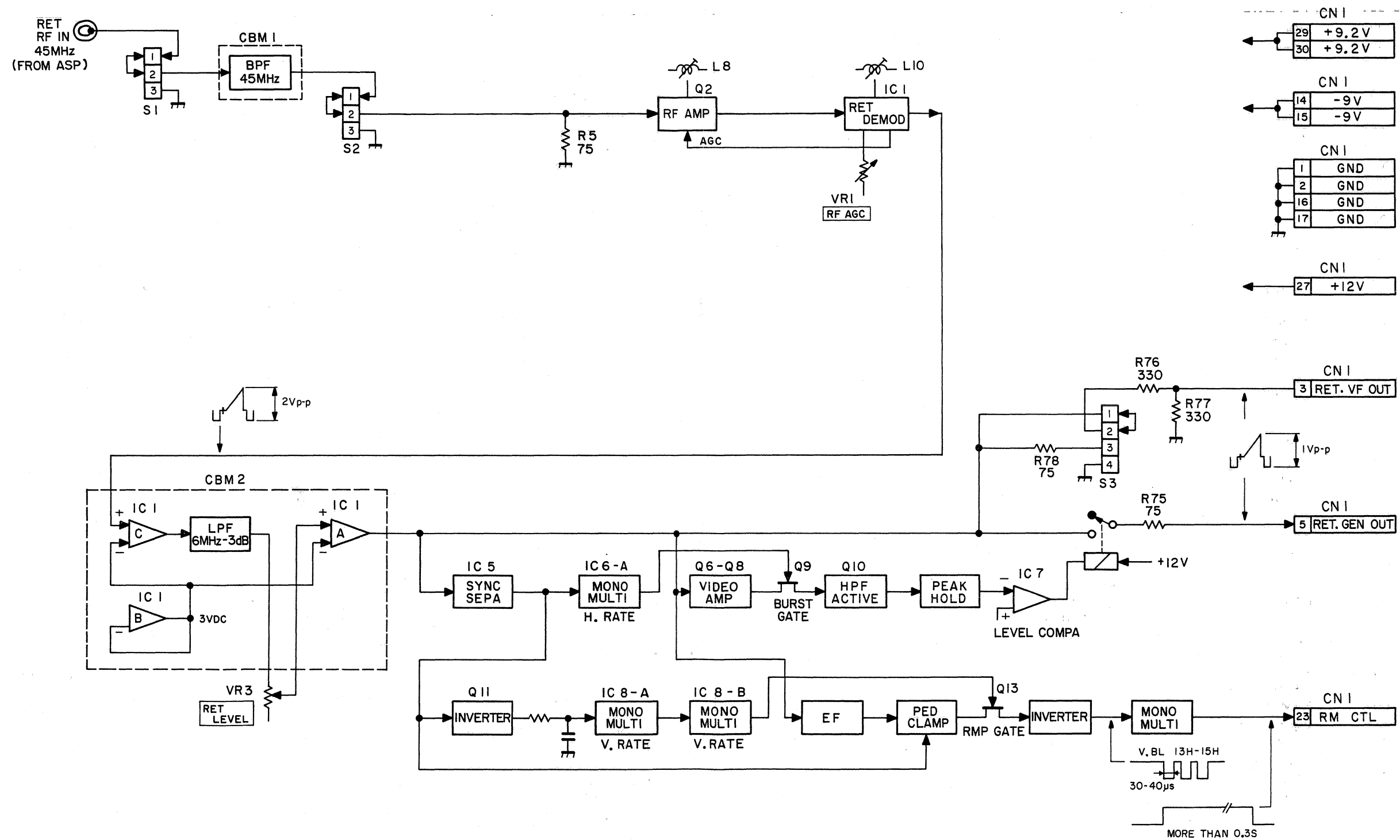
Symbol No.	Part No.	Part Name	Description
1	SC10157-001	HANDLE	
2	SC31516-001	COVER	
3	SC40886-001	GUIDE	
4	C40936	SPRING	
5	SC44821-001	SCREW	
6	SC43390-001	SCREW	
S1	SDSF2606M	SCREW	M2.6 × 6
S2	SSSP3006N	SCREW	M3 × 6



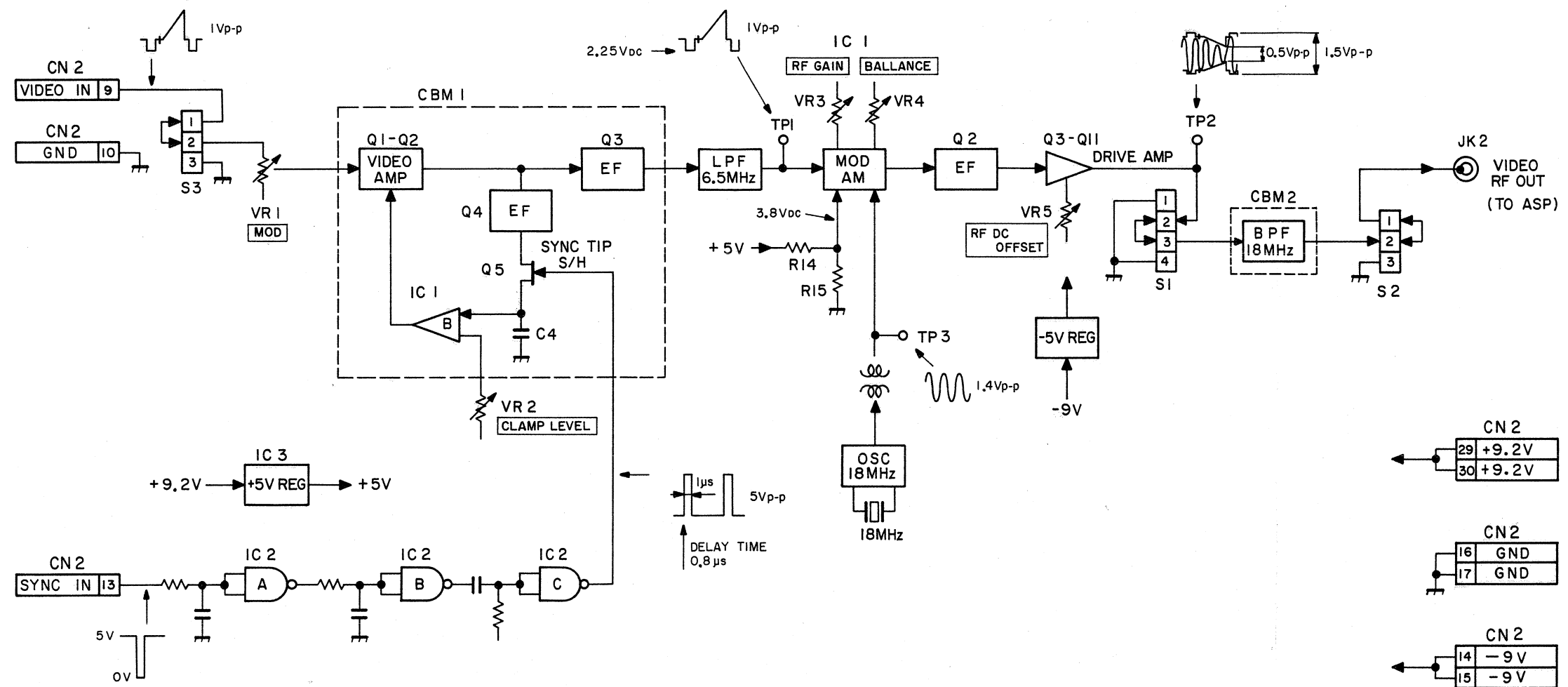
## SECTION 5 CHARTS AND DIAGRAMS

### 5.1 BLOCK DIAGRAM

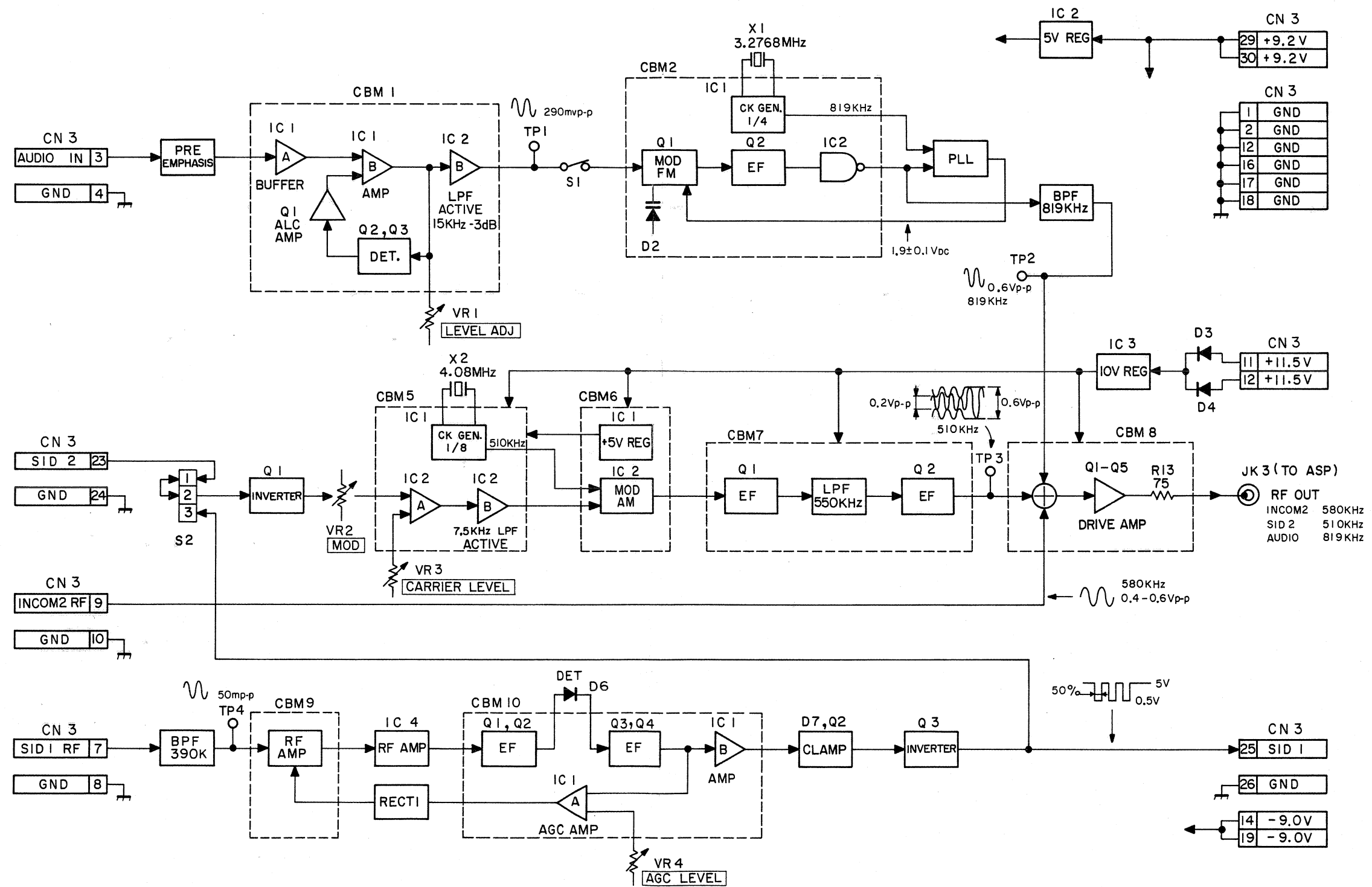
#### 5.1.1 RGD BOARD BLOCK DIAGRAM



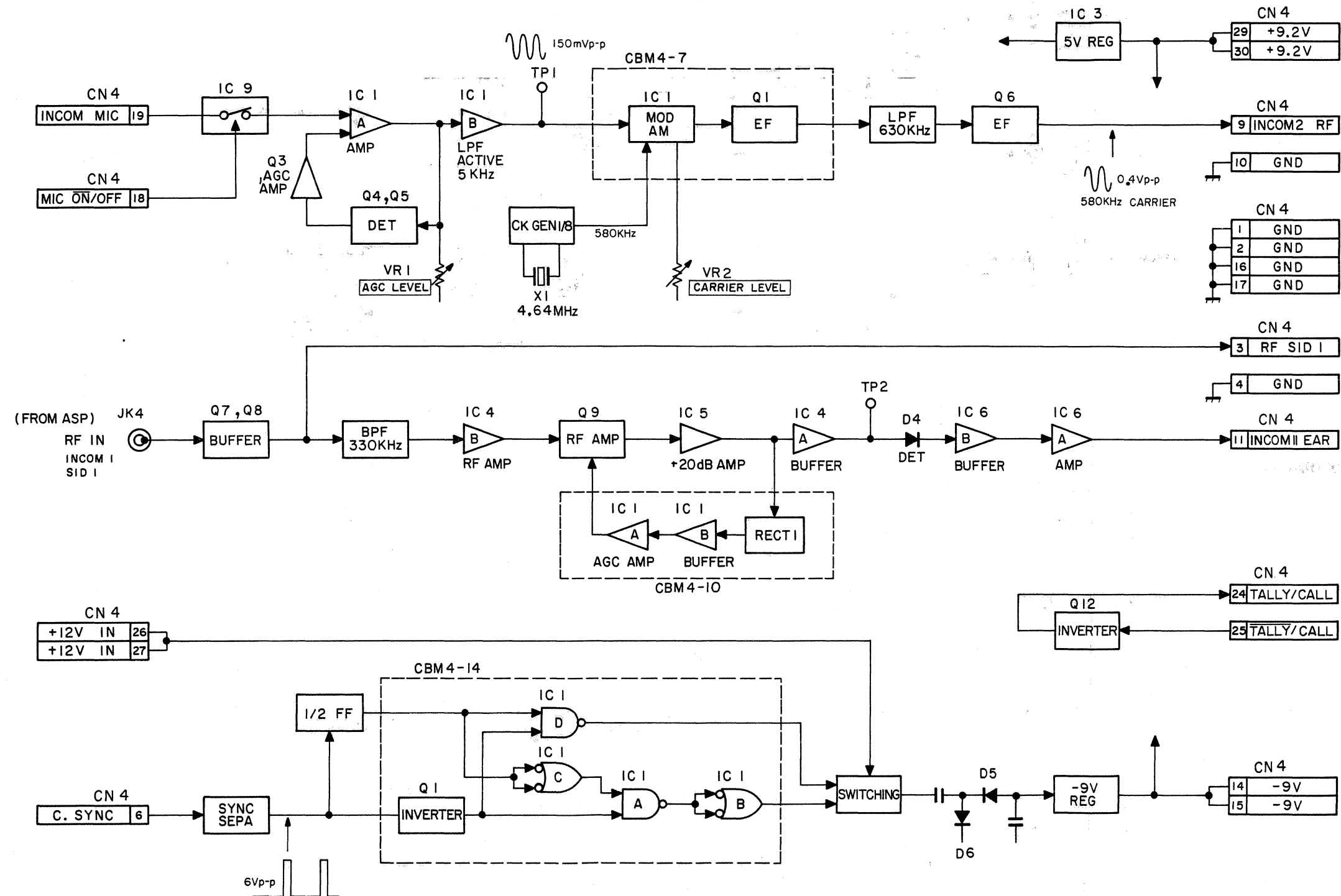
# 5.1.2 CMM BOARD BLOCK DIAGRAM



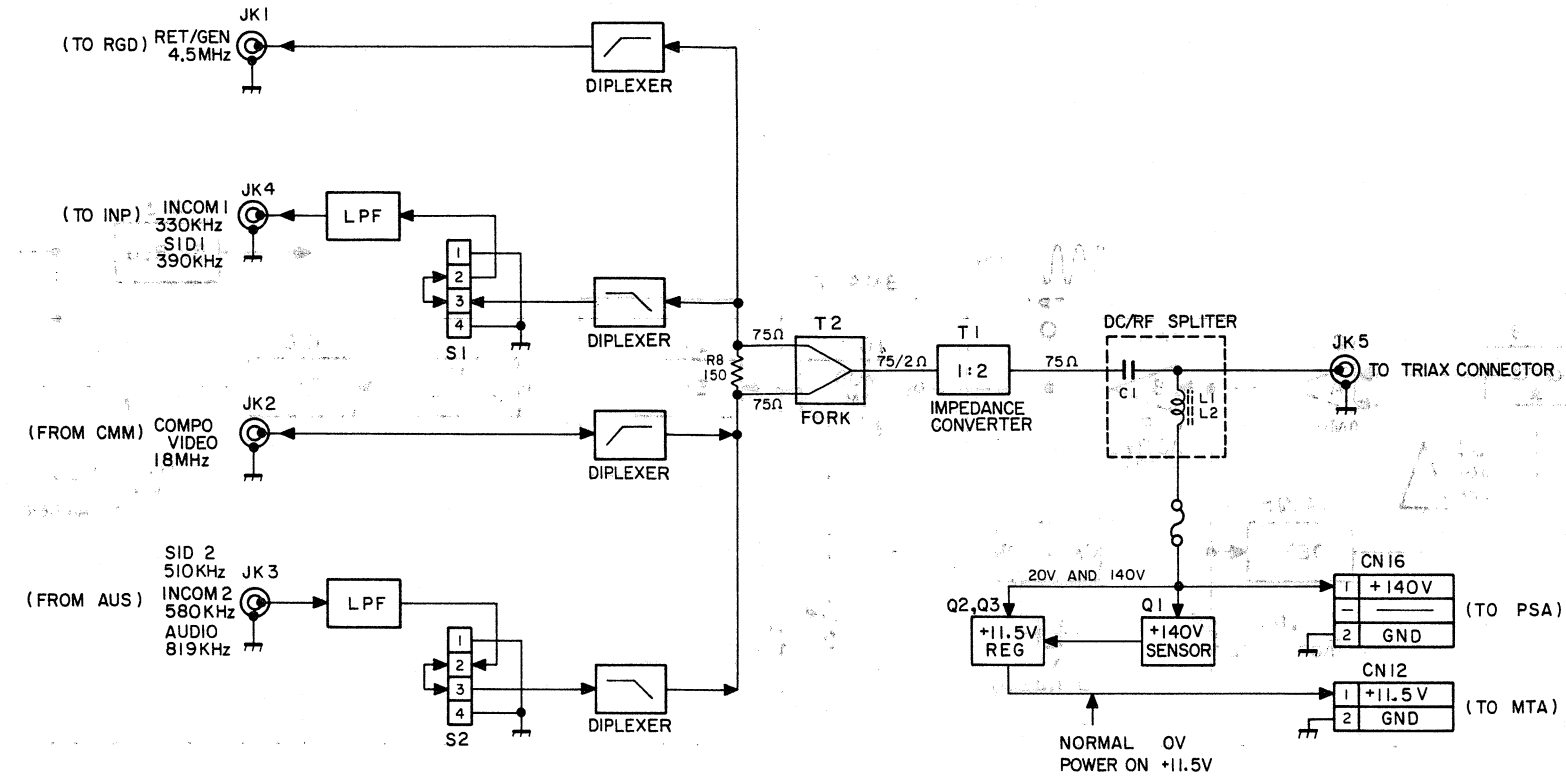
5.1.3 AUS BOARD BLOCK DIAGRAM



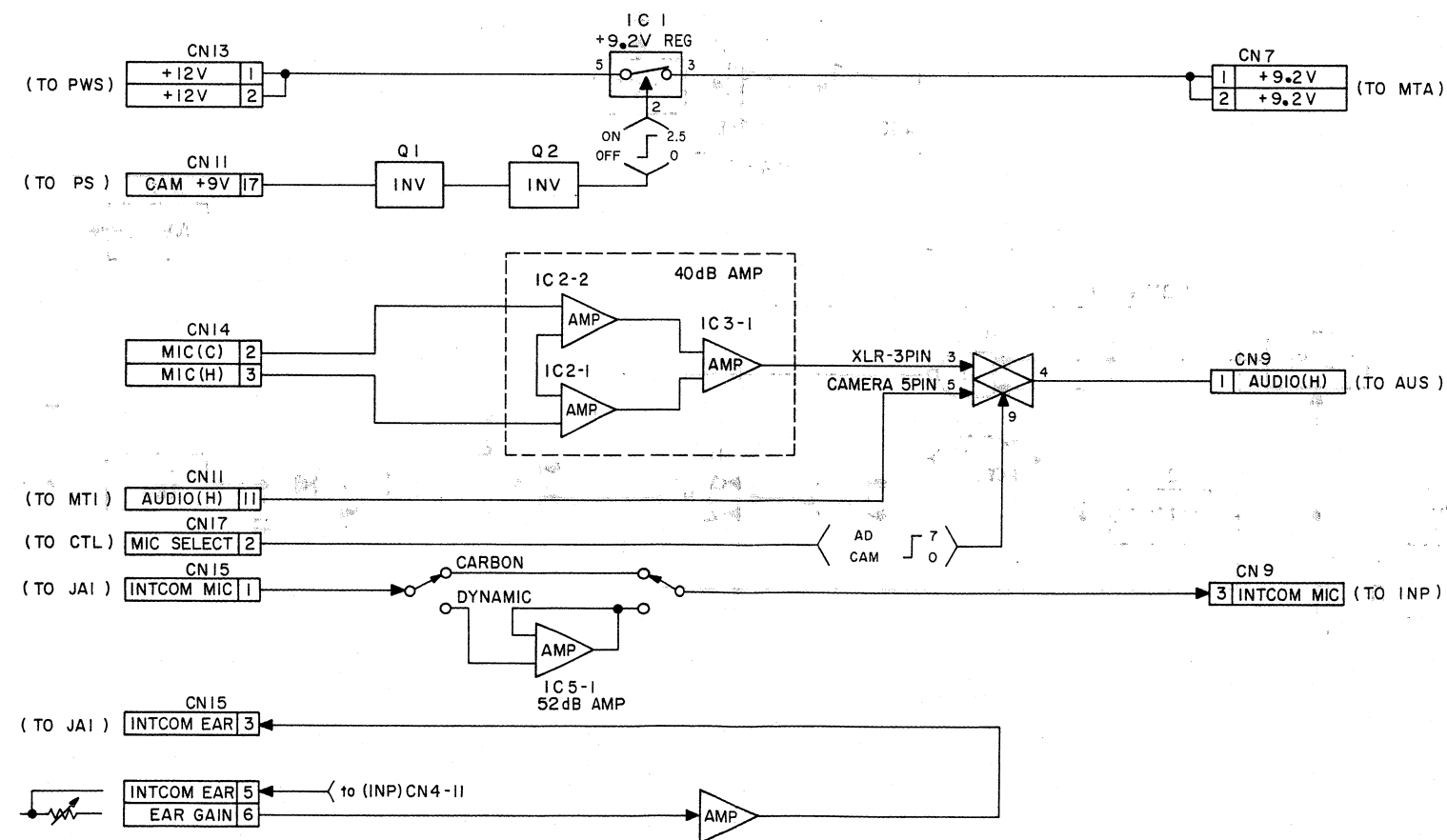
# 5.1.4 INP BOARD BLOCK DIAGRAM



### 5.1.5 ASP BOARD BLOCK DIAGRAM



### 5.1.6 ADB BOARD BLOCK DIAGRAM



### 5.2.1 ADAPTER OVERALL WIRING



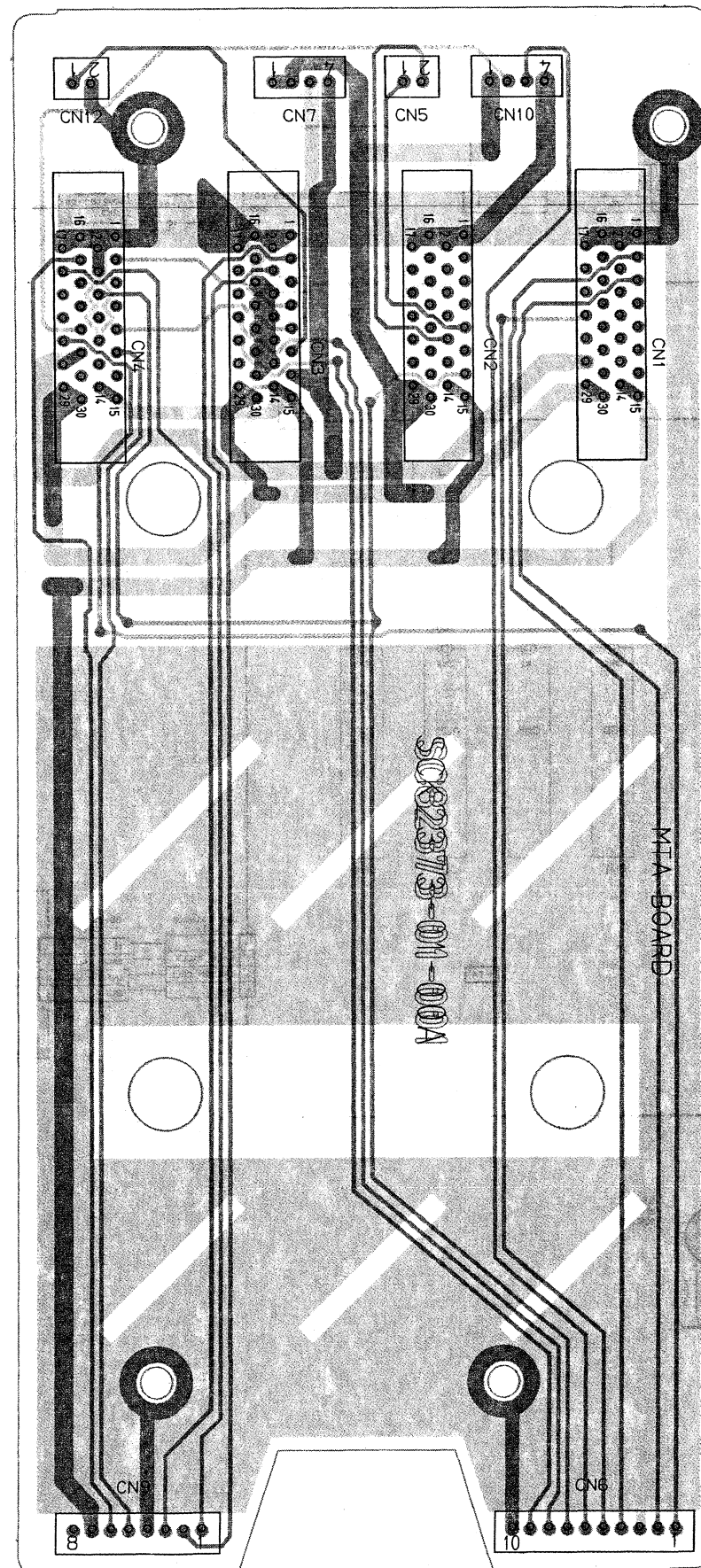
OVERALL

MTA

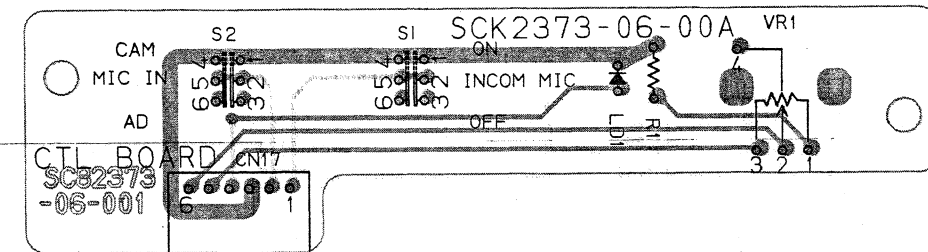
MTA

## 5.2.2 MTA/CTL/BAT/CNB CIRCUIT BOARD

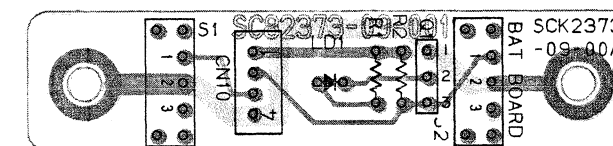
### ● MTA



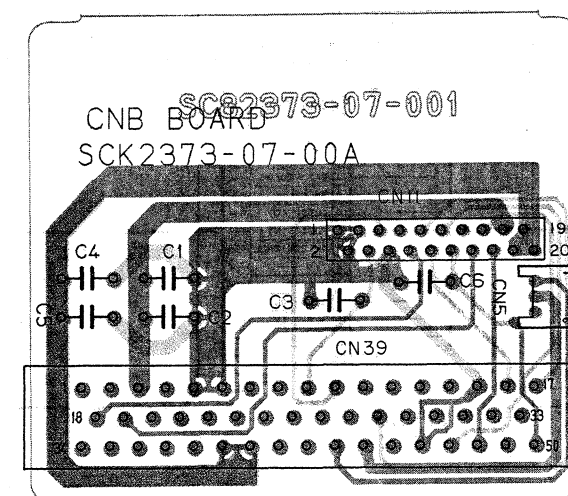
### ● CTL



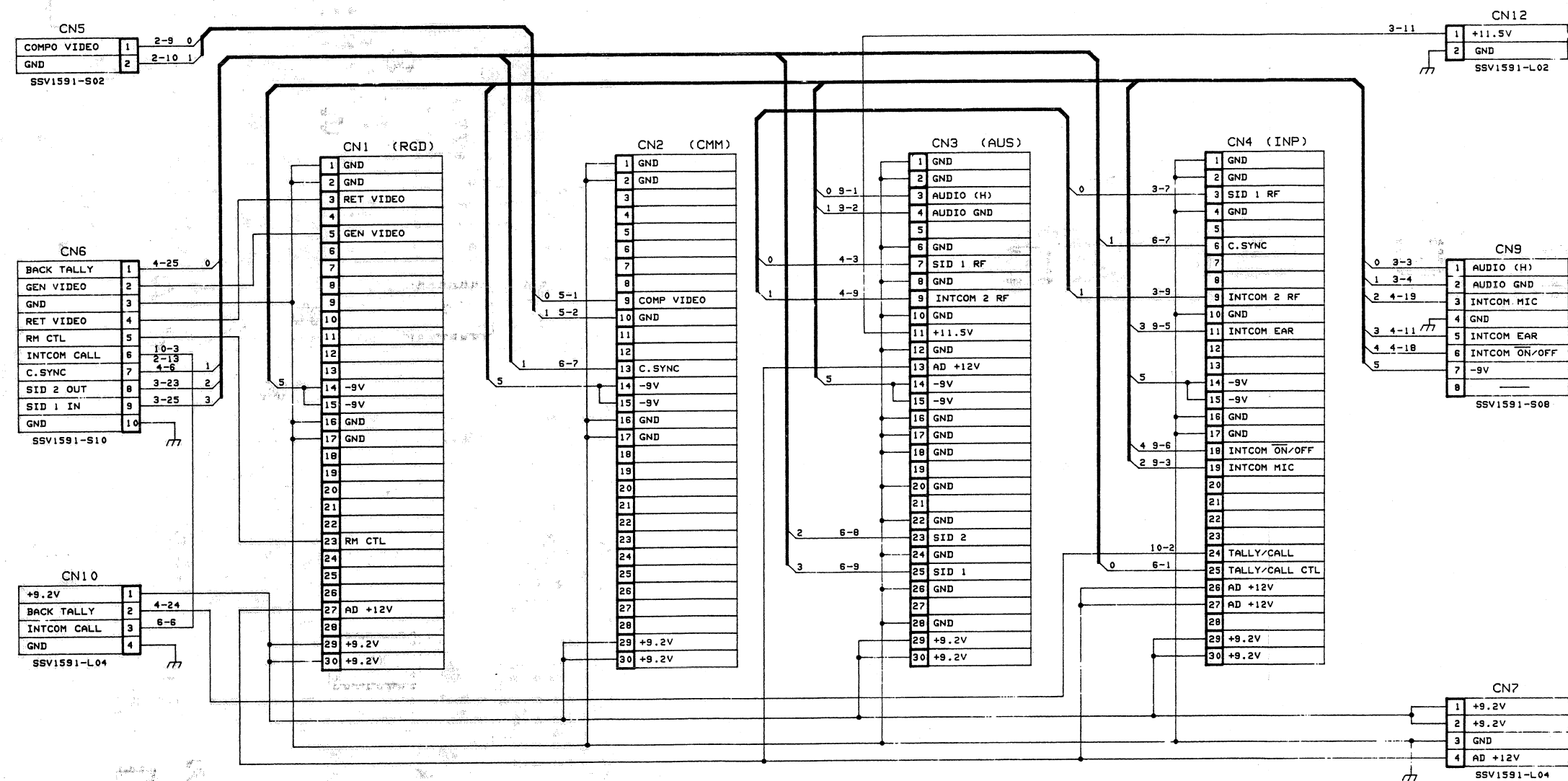
### ● BAT



### ● CNB



5.2.3 MTA BOARD SCHEMATIC DIAGRAM





MTA

RGD

RGD

## 5.2.4 RGD CIRCUIT BOARD

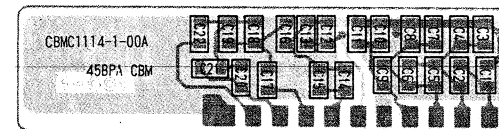
MANDAIO DIAMOND CHA 15 P/W

- CBM1  
45BPA Board [CBMC1114-1-00A]

— Side A —

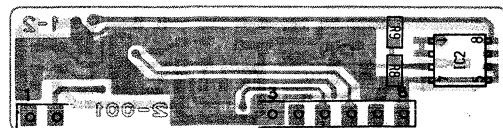


— Side B —

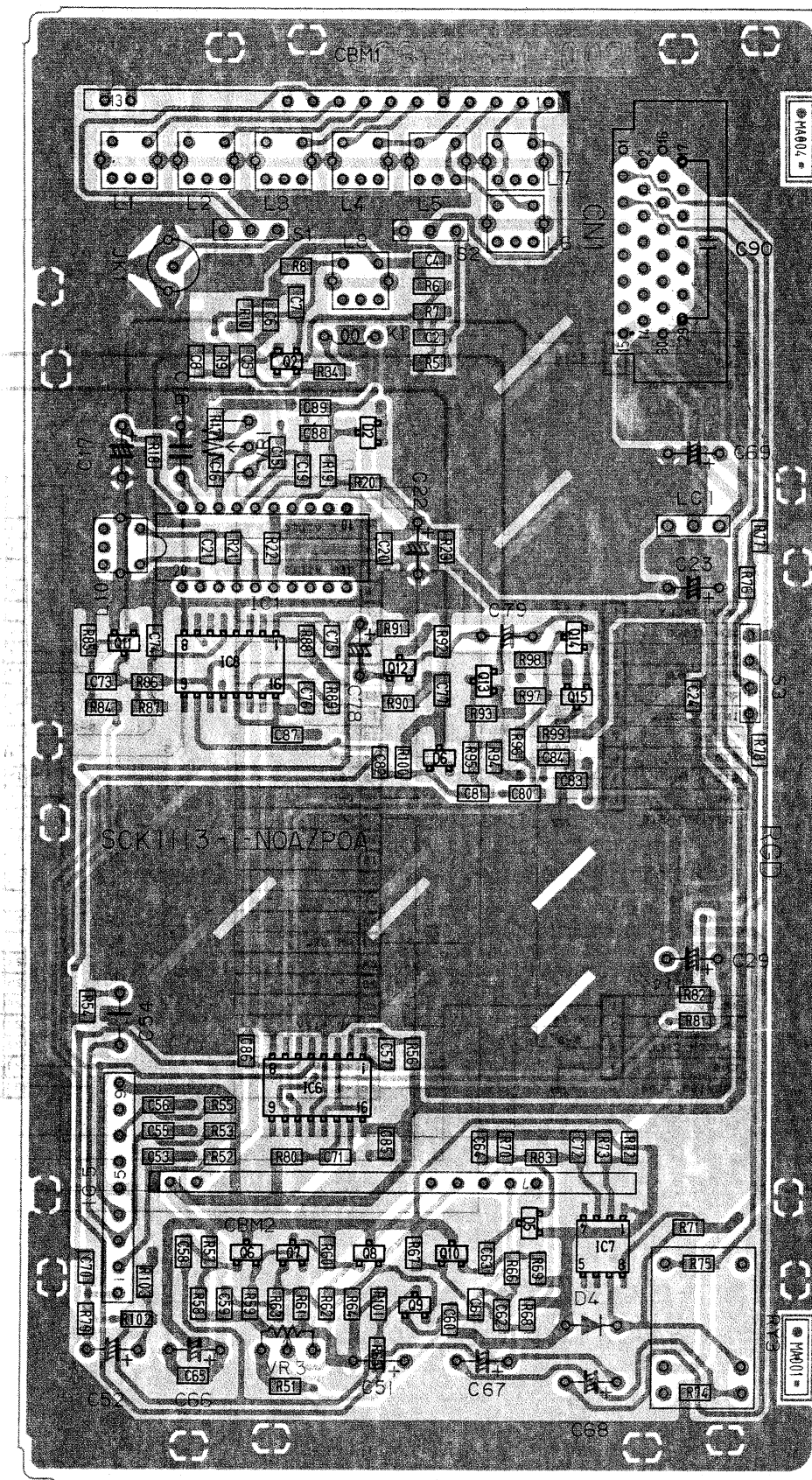
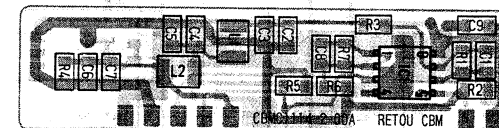


- CBM2  
RETOUT Board [CBMC1114-2-00A]

— Side A —



— Side B —

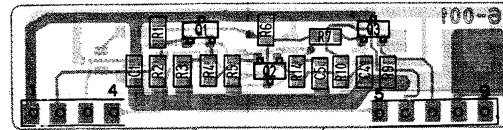




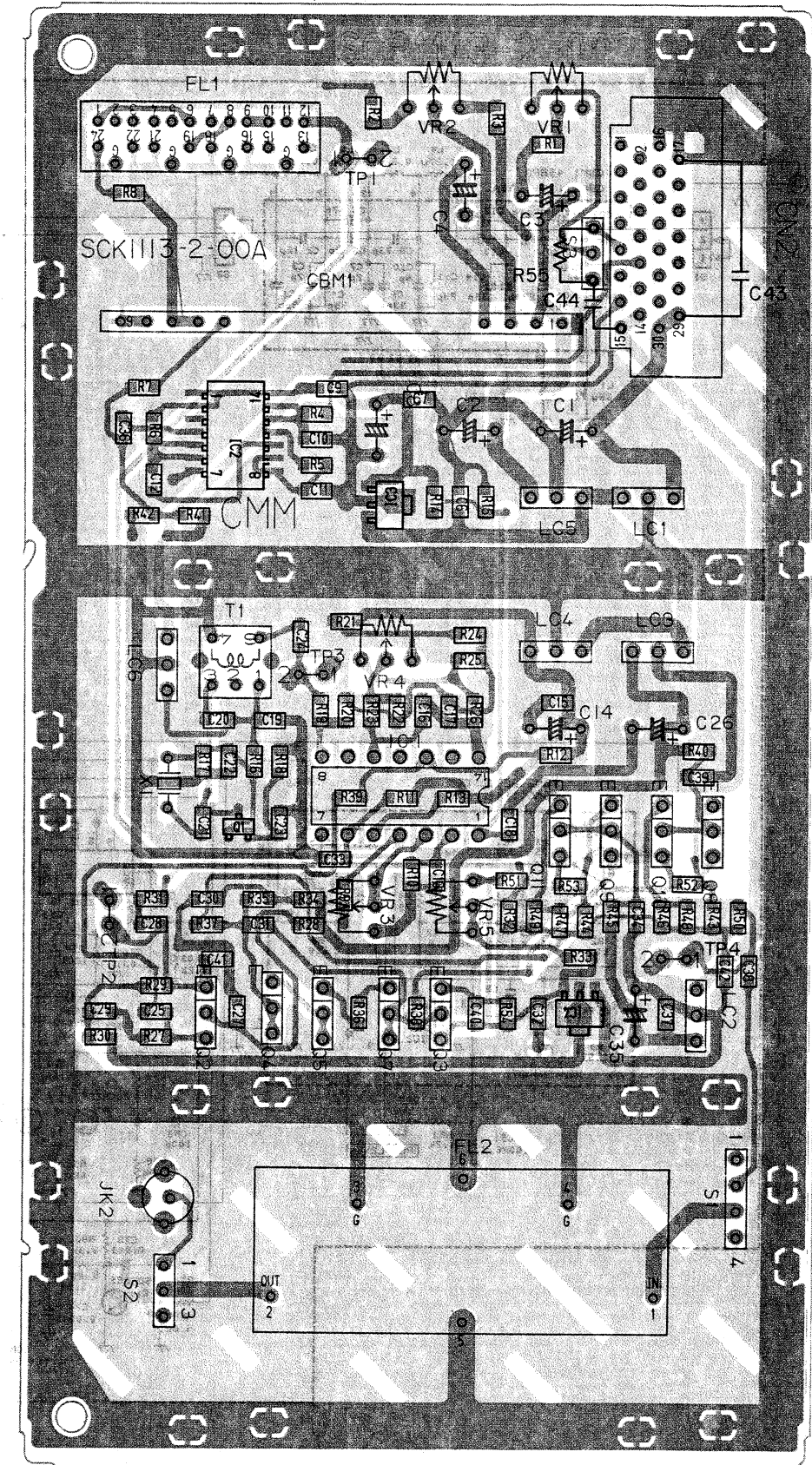
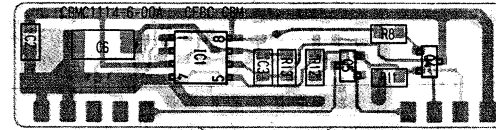
## 5.2.6 CMM CIRCUIT BOARD

- CBM1  
CFBC Board [CBMC1114-6-00A]

— Side A —

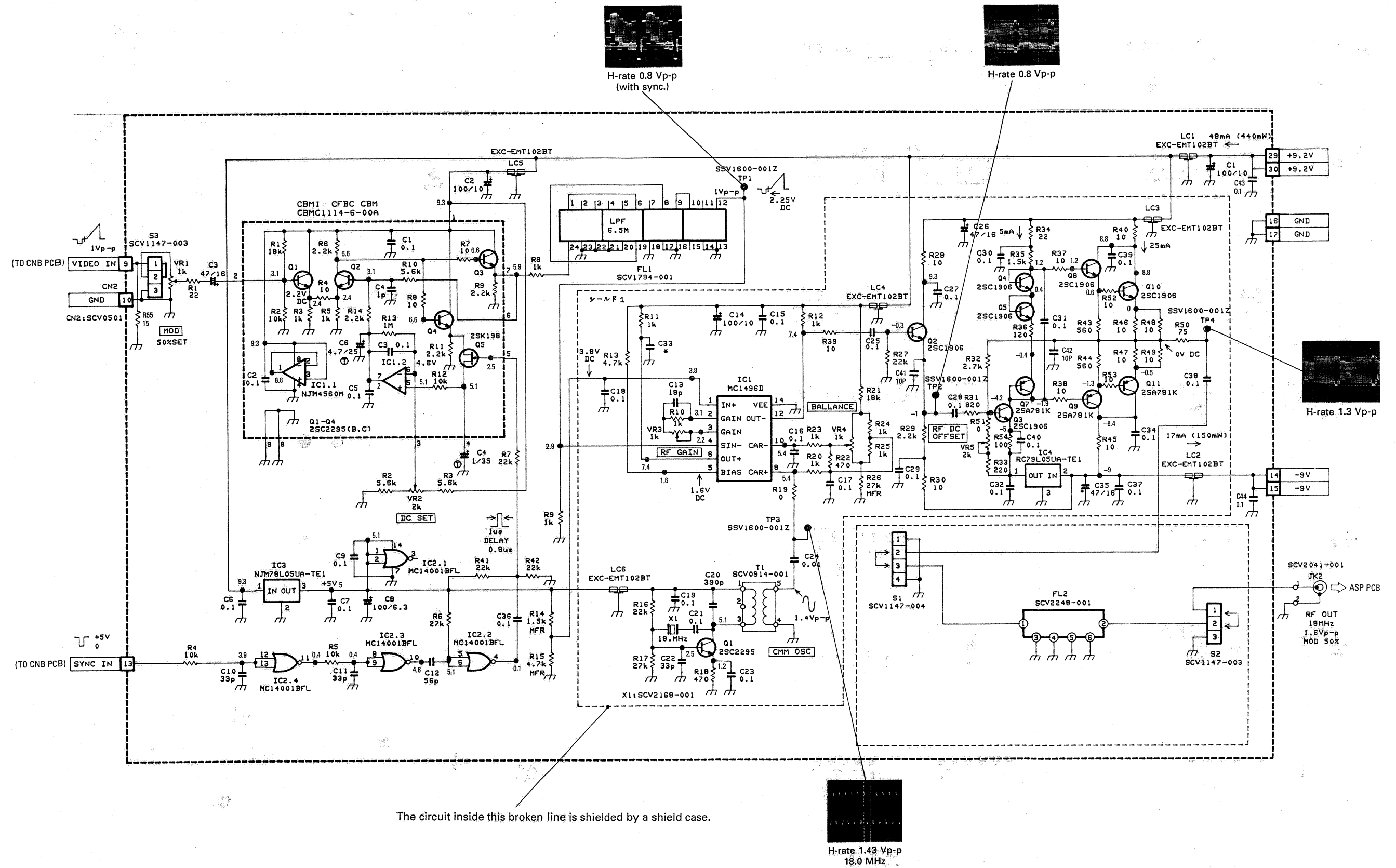


— Side B —





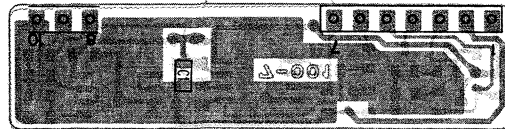
## 5.2.7 CMM BOARD SCHEMATIC DIAGRAM



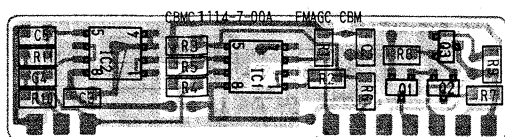
## 5.2.8 AUS CIRCUIT BOARD

- CBM1  
FMAGC Board [CBMC1114-7-00A]

— Side A —

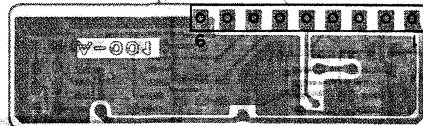


— Side B —

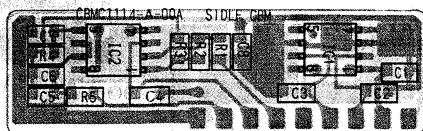


- CBM5  
SIDLF Board [CBMC1114-A-00A]

— Side A —

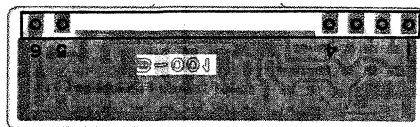


— Side B —

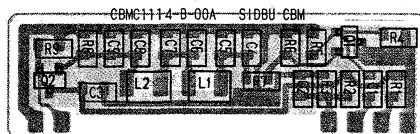


- CBM7  
SIDBU Board [CBMC1114-B-00A]

— Side A —

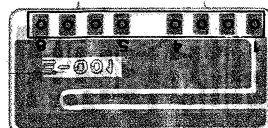


— Side B —

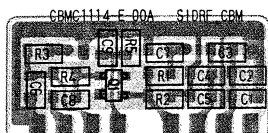


- CBM9  
SIDRF Board [CBMC1114-E-00A]

— Side A —

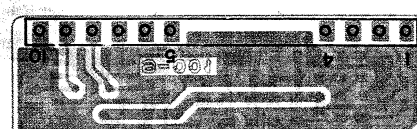


— Side B —

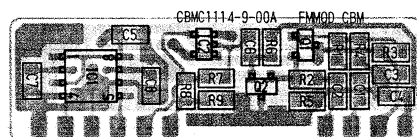


- CBM2  
FMMOD Board [CBMC1114-9-00A]

— Side A —

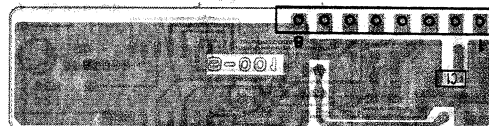


— Side B —

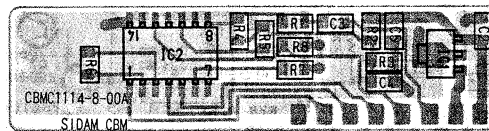


- CBM6  
SIDAM Board [CBMC1114-8-00A]

— Side A —

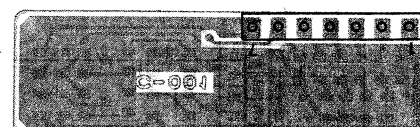


— Side B —

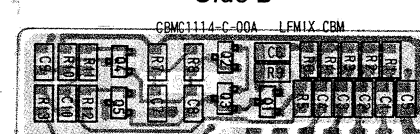


- CBM8  
LFMIX Board [CBMC1114-C-00A]

— Side A —

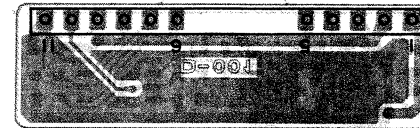


— Side B —

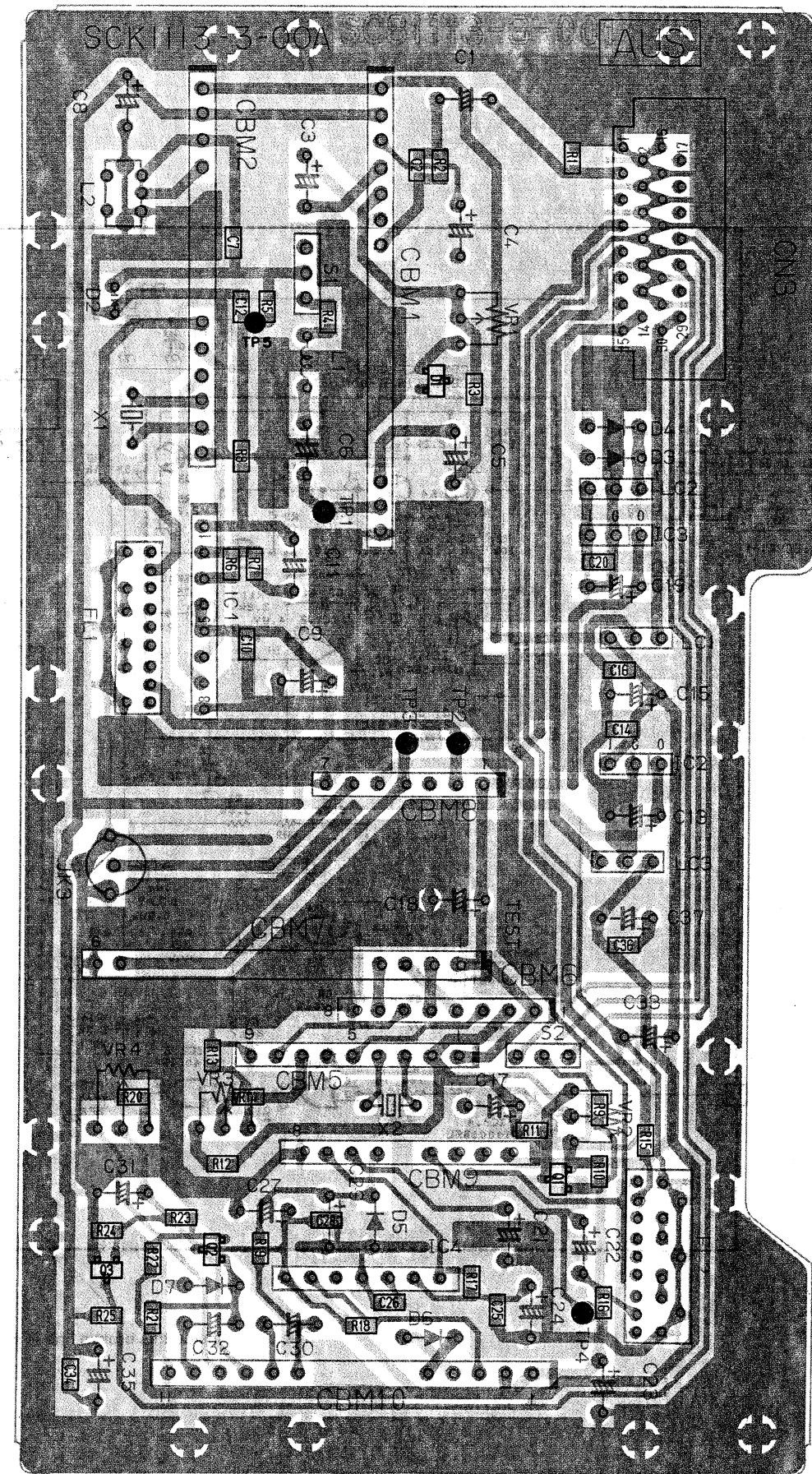
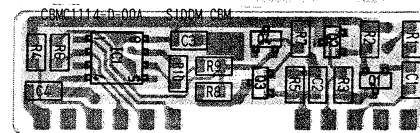


- CBM10  
SIDDM Board [CBMC1114-D-00A]

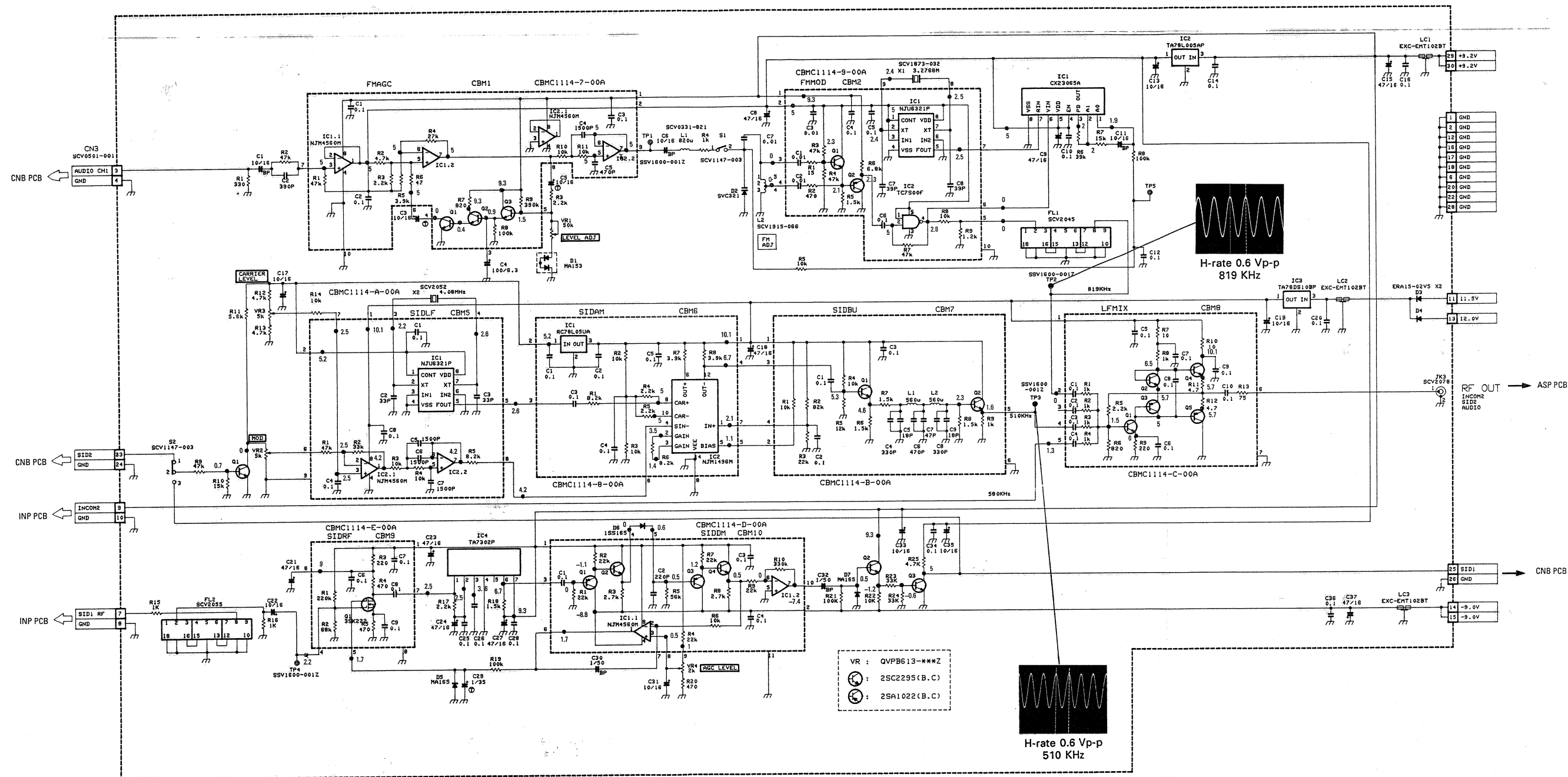
— Side A —



— Side B —



5.2.9 AUS BOARD SCHEMATIC DIAGRAM

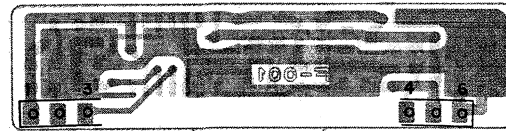




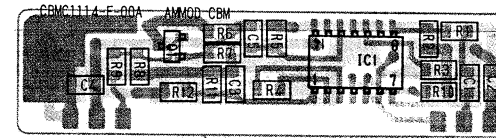
## 5.2.10 INP CIRCUIT BOARD

- CBM1  
AMMOD Board [CBMC1114-F-00A]

— Side A —

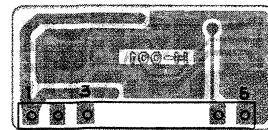


— Side B —

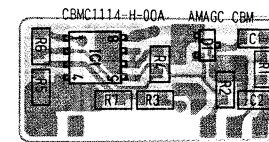


- CBM2  
AM AGC Board [CBMC1114-H-00A]

— Side A —

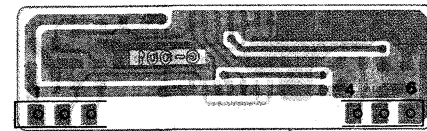


— Side B —

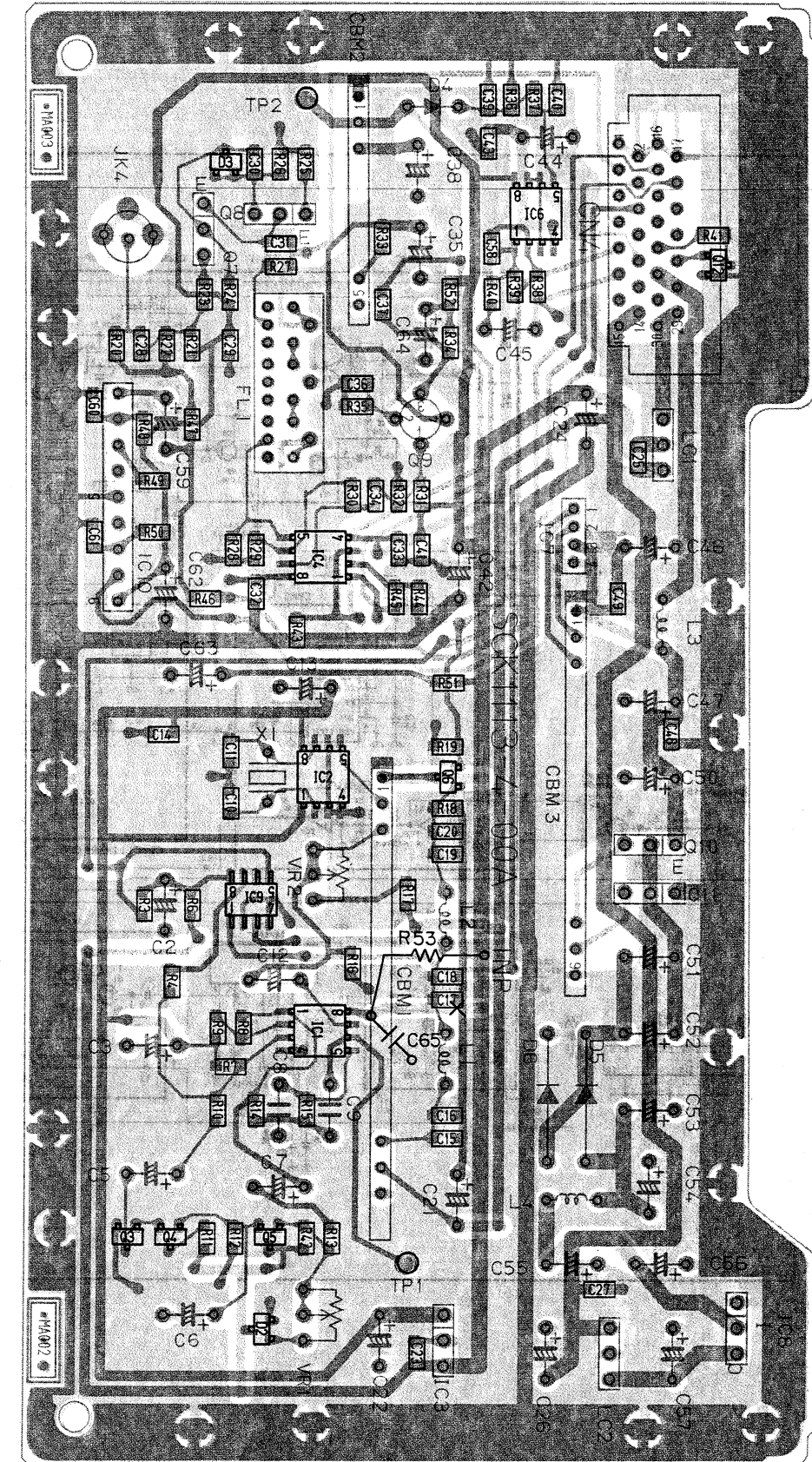
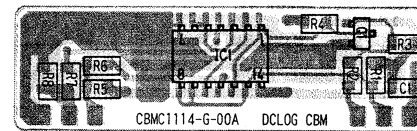


- CBM3  
DCLOG Board [CBMC1114-G-00A]

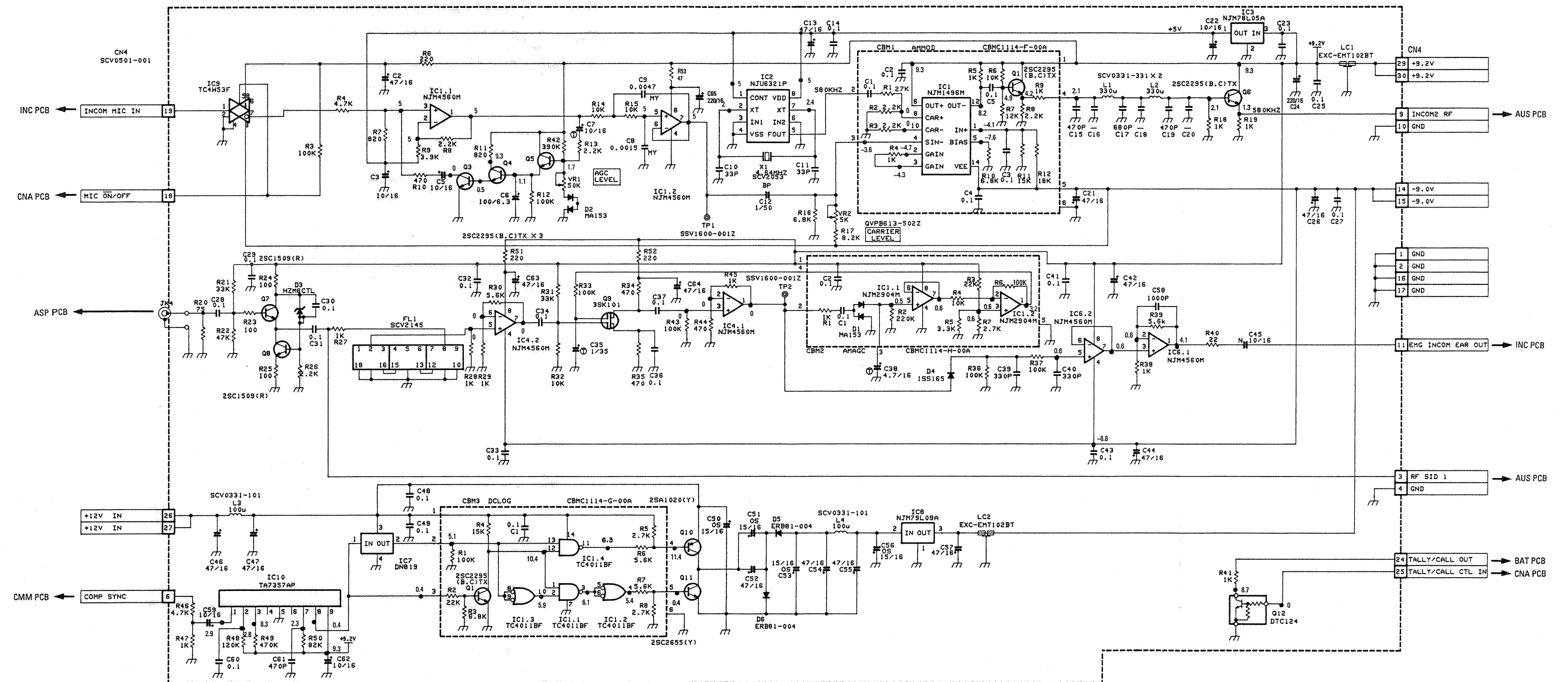
— Side A —



— Side B —

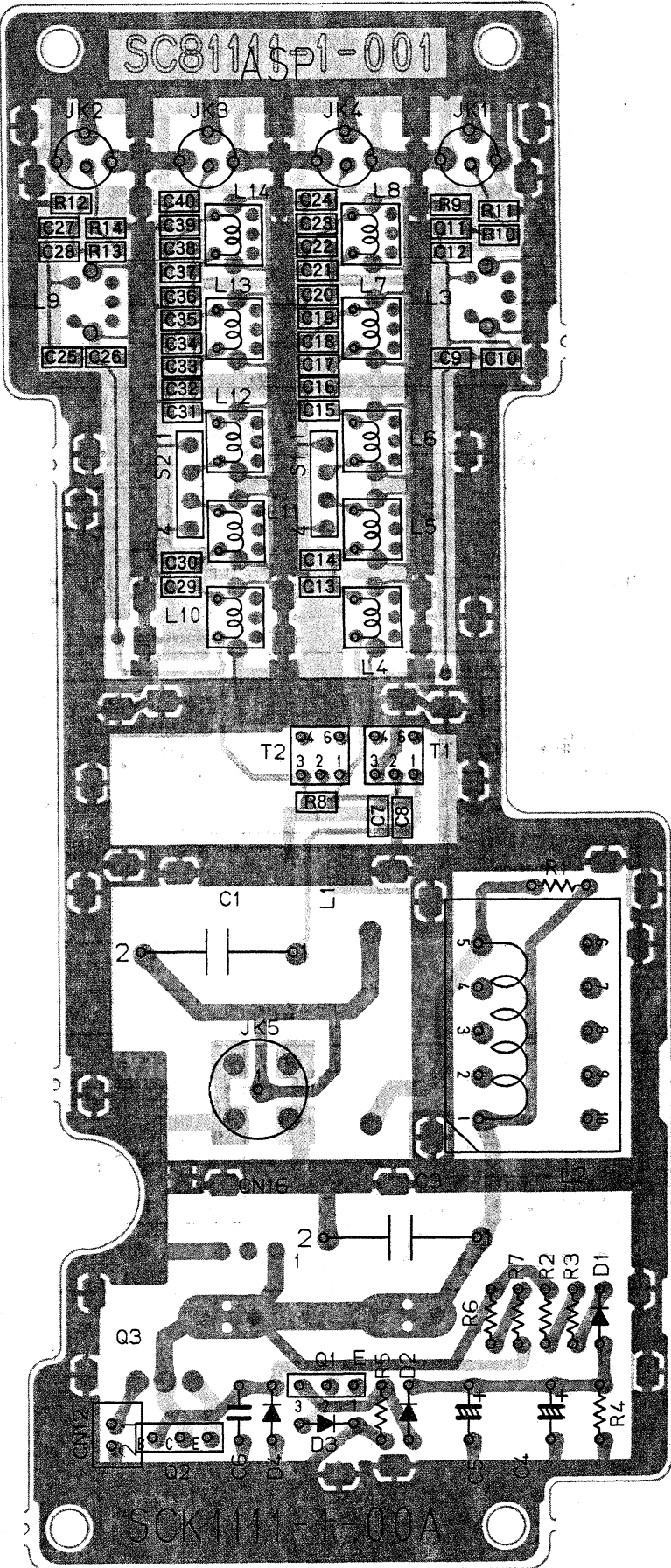


# 5.2.11 INP BOARD SCHEMATIC DIAGRAM




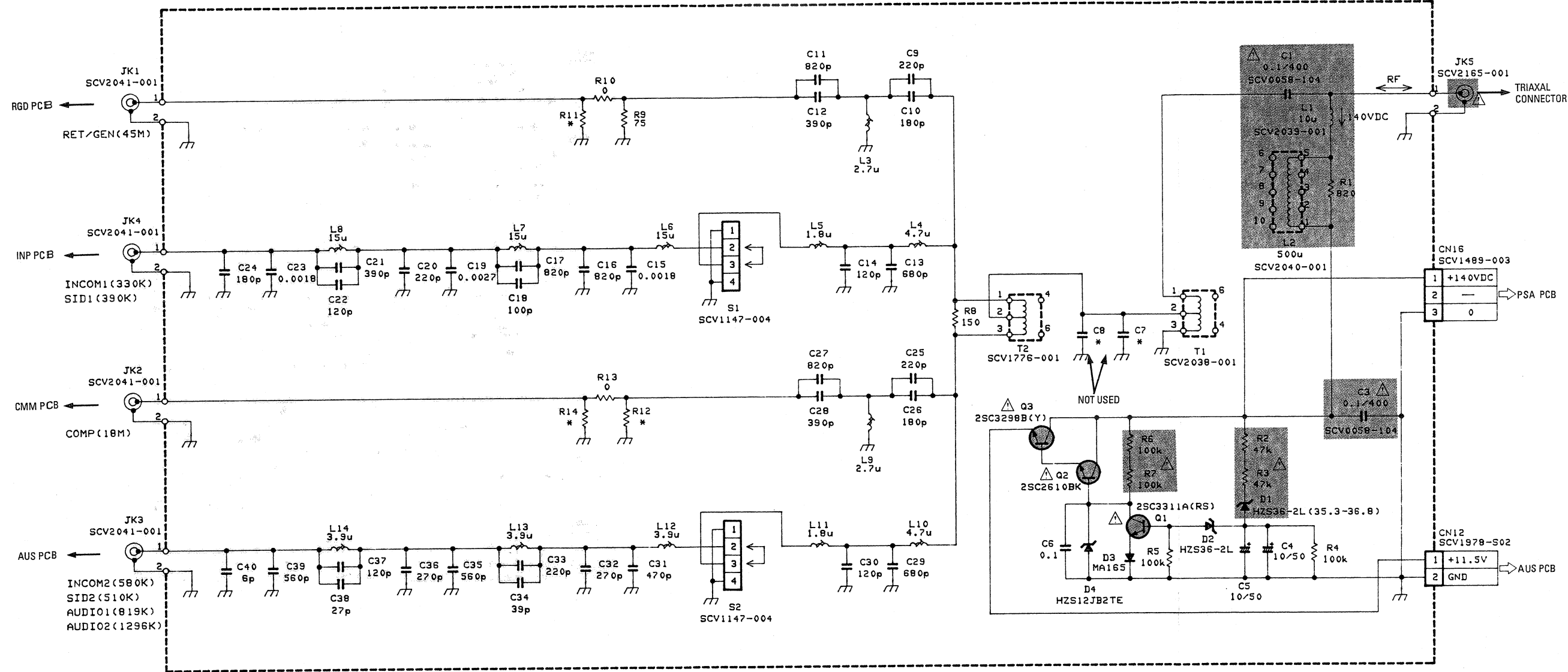


5.2.12 ASP CIRCUIT BOARD



# 5.2.13 ASP BOARD SCHEMATIC DIAGRAM

- Shaded (  ) parts are critical for safety.  
Replace only with specified part numbers.



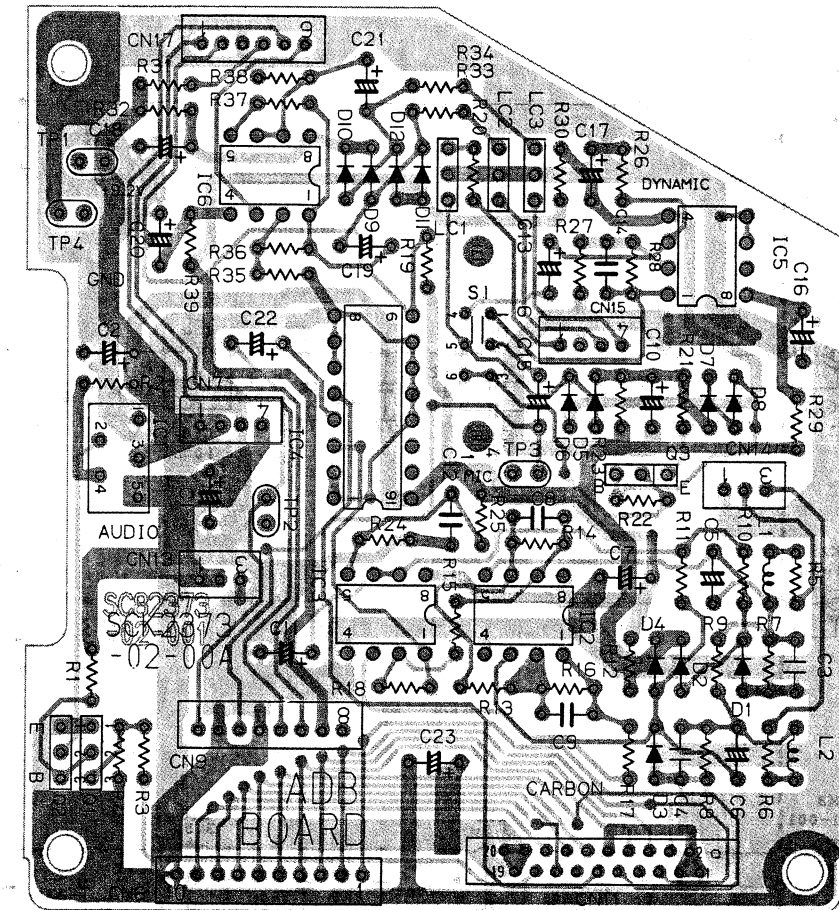
THE PARTS MARKED BY \* ARE OPEN.

ASP

ADB

ADB

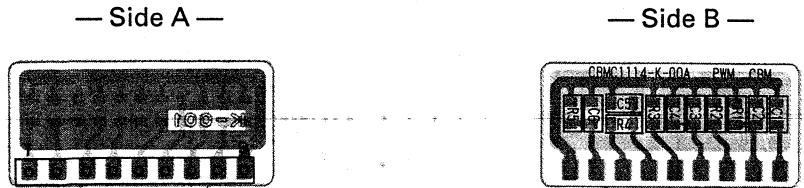
# 5.2.14 ADB CIRCUIT BOARD



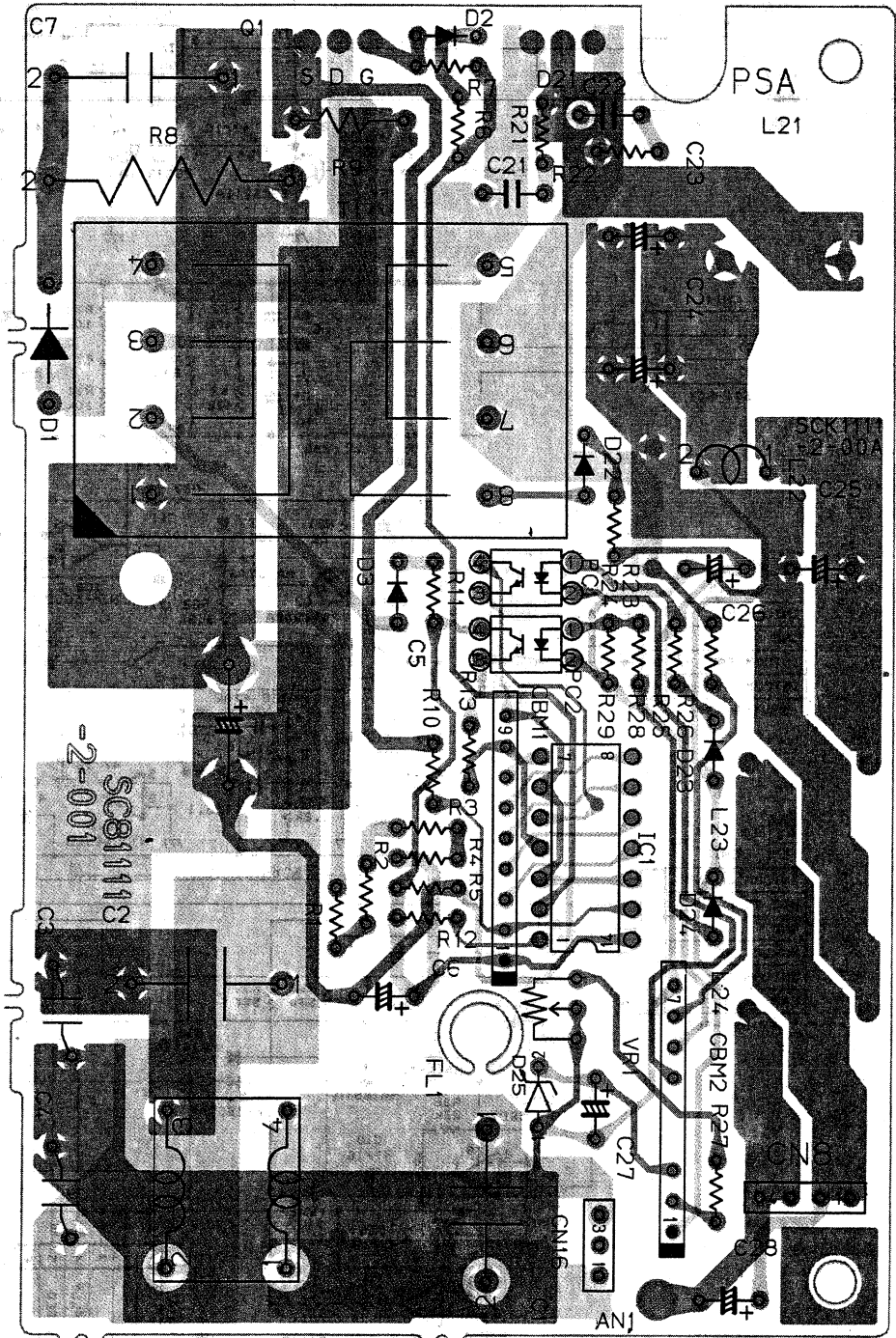


5.2.16 PSA CIRCUIT BOARD

- CBM1  
PWM Board [CBMC1114-K-00A]

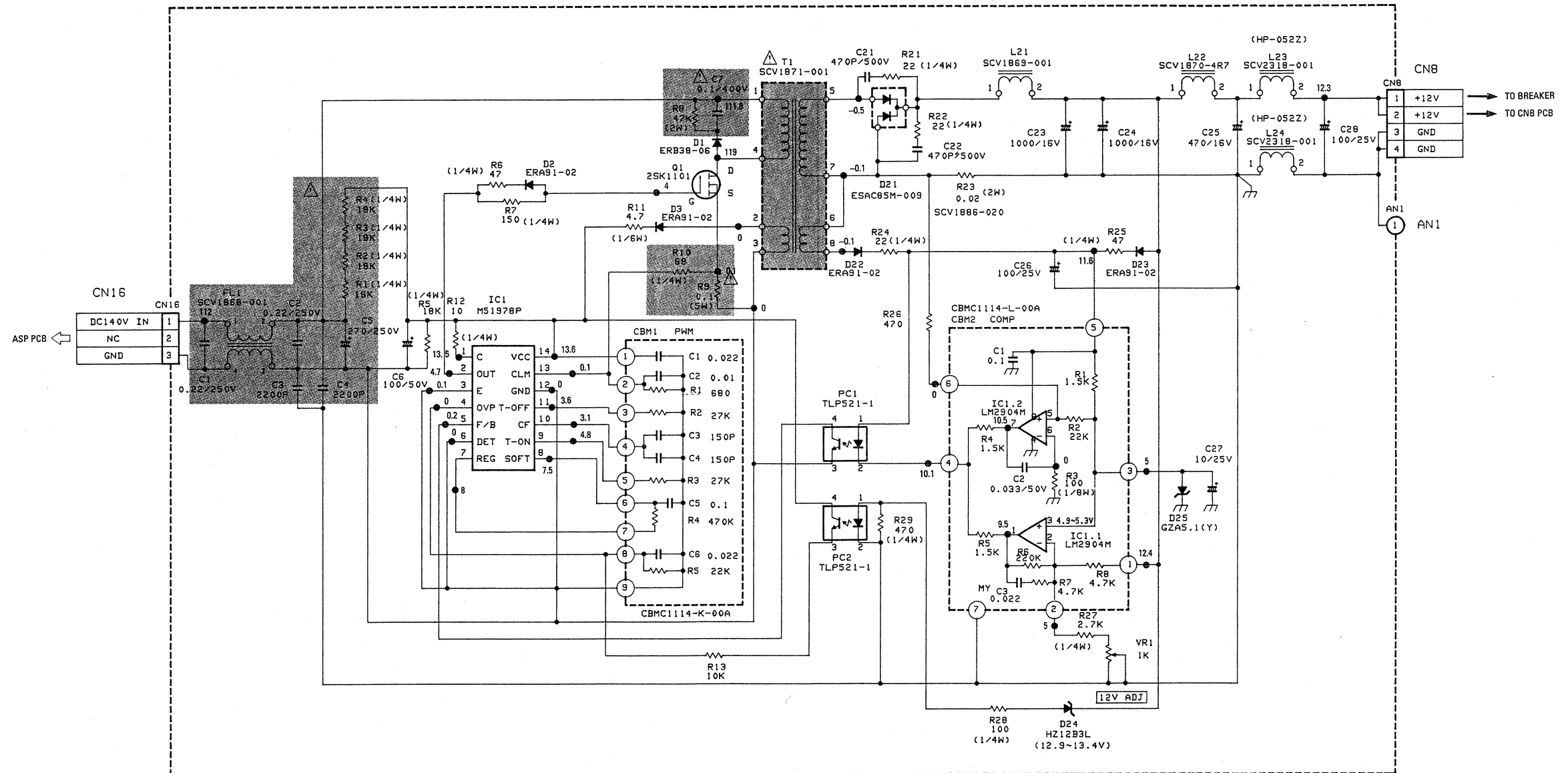


- CBM2  
COMP Board [CBMC1114-L-00A]



## 5.2.17 PSA BOARD SCHEMATIC DIAGRAM

- Shaded (■) parts are critical for safety.  
Replace only with specified part numbers.





## SECTION 6 ELECTRICAL PARTS LIST

### SAFETY PRECAUTION:

Parts identified by the  $\Delta$  symbol are critical for safety. Replace only with specified parts numbers. For maximum reliability and performance, all other replacement parts should be identical to those specified.

### NOTE:

- Parts not denoted by parts numbers are not supplied by JVC.
- Abbreviations in this list are as follows:

#### RESISTORS

In the "Description" column:

- All resistance values are in ohms ( $\Omega$ ).
- K expresses kilo-ohm (1 000 ohms,  $k\Omega$ ).
- M expresses mega-ohm ( $10^6$  ohms,  $M\Omega$ ).

In the "Parts Name" column:

- COMP. RESISTOR : Composition Resistor
- U.F. RESISTOR : Non-inflammable Resistor
- O.M.F. RESISTOR : Oxide Metalized Film Resistor
- FUSI. RESISTOR : Fusible Resistor
- M.P. RESISTOR : Metal Plate Resistor
- M.G. RESISTOR : Metal Graze Resistor
- M.F. RESISTOR : Metal Film Resistor
- W.W. RESISTOR : Wire Wound Resistor

#### CAPACITORS

In the "Description" column:

- All capacitance values are in microfarad ( $\mu F$ ) unless otherwise indicated.
- P expresses picofarad ( $10^{-12}$  farad, pF).

In the "Parts Name" column:

- TRIM. CAPACITOR : Trimmer Capacitor
- CER. CAPACITOR : Ceramic Capacitor
- E. CAPACITOR : Electrolytic Capacitor
- TAN. CAPACITOR : Tantalum Capacitor
- MPP CAPACITOR : Metalized Polypropylene Capacitor
- O.F. CAPACITOR : Oil Film Capacitor
- MPF CAPACITOR : Metalized Polyfilm Capacitor
- F.M. CAPACITOR : Film Mica Capacitor
- P.P. CAPACITOR : Polypropylene Capacitor
- P.S. CAPACITOR : Polystyrene Capacitor

**Note:** In the "Description" column of the parts list, (U) means the parts for the U version while (E) is for the E Version.

Symbol No.	Part No.	Part Name	Description
IC1	SCV1585-064	I.C.(M)	JVC (U) ← for U version
	SCV1585-067	I.C.(M)	JVC (E) ← for E version

# 6.1 MTA board assembly list 11

<SCK2373-01-00A>

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Symbol No.	Part No.	Part Name	Description
CN1	SCV0500-001	CONNECTOR	
CN2	SCV0500-001	CONNECTOR	
CN3	SCV0500-001	CONNECTOR	
CN4	SCV0500-001	CONNECTOR	
CN5	SSV1591-S02	CONNECTOR	2-PIN
CN6	SSV1591-S10	CONNECTOR	10-PIN
CN7	SSV1591-L04	CONNECTOR	4-PIN
CN9	SSV1591-S08	CONNECTOR	8-PIN
CN10	SSV1591-L04	CONNECTOR	4-PIN
CN12	SSV1591-L02	CONNECTOR	2-PIN

# 6.2 RGD board assembly list 12

<SCK1113-1-P0A>

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Symbol No.	Part No.	Part Name	Description
IC1	TA8611AN	I.C.(M)	TOSHIBA
IC5	TA7357AP	I.C.(MONO-ANA)	TOSHIBA
IC6	TC4538BF	I.C.(M)	TOSHIBA
IC7	NJM311M	I.C.(M)	JRC
IC8	TC4538BF	I.C.(M)	TOSHIBA
Q2	3SK222	F.E.T	NEC
Q6	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q7	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q8	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q9	2SK198(Q.R)	F.E.T.	MATSUSHITA
Q10	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q11	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q12	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q13	2SK198(Q.R)	F.E.T.	MATSUSHITA
Q14	2SK198(Q.R)	F.E.T.	MATSUSHITA
Q15	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
D2	MA152A	DIODE	MATSUSHITA
D4	ERA15-02	SI DIODE	KYODO DENKI
D5	MA153	DIODE	MATSUSHITA
R5	NRVA02D-75R0	M.F.RESISTOR	75 1/10W
R6	NRVA02D-1003	M.F.RESISTOR	100K 1/10W
R7	NRVA02D-3302	M.F.RESISTOR	33K 1/10W
R8	NRVA02D-6800	M.F.RESISTOR	680 1/10W
R9	NRVA02D-2200	M.F.RESISTOR	220 1/10W
R10	NRVA02D-22R0	M.F.RESISTOR	22 1/10W
R17	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R18	NRVA02D-47R0	M.F.RESISTOR	47 1/10W
R19	NRSA02J-105	MGR	1.0M 1/10W
R20	NRSA02J-105	MGR	1.0M 1/10W
R21	NRVA02D-5601	M.F.RESISTOR	5.6K 1/10W
R22	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R23	NRVA02D-22R0	M.F.RESISTOR	22 1/10W
R34	NRVA02D-1003	M.F.RESISTOR	100K 1/10W
R51	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W
R52	NRVA02D-1203	M.F.RESISTOR	120K 1/10W
R53	NRVA02D-4703	M.F.RESISTOR	470K 1/10W
R54	NRVA02D-1202	M.F.RESISTOR	12K 1/10W
R55	NRVA02D-8202	M.F.RESISTOR	82K 1/10W
R56	NRVA02D-1802	M.F.RESISTOR	18K 1/10W
R57	NRVA02D-2702	M.F.RESISTOR	27K 1/10W
R58	NRVA02D-6801	M.F.RESISTOR	6.8K 1/10W
R59	NRVA02D-6800	M.F.RESISTOR	680 1/10W
R60	NRVA02D-5601	M.F.RESISTOR	5.6K 1/10W
R61	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W
R62	NRVA02D-6801	M.F.RESISTOR	6.8K 1/10W
R63	NRVA02D-4700	M.F.RESISTOR	470 1/10W
R64	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R65	NRVA02D-1502	M.F.RESISTOR	15K 1/10W
R66	NRVA02D-4700	M.F.RESISTOR	470 1/10W
R67	NRVA02D-3901	M.F.RESISTOR	3.9K 1/10W
R68	NRVA02D-1202	M.F.RESISTOR	12K 1/10W
R69	NRVA02D-6801	M.F.RESISTOR	6.8K 1/10W
R70	NRSA02J-105	MGR	1.0M 1/10W
R71	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W
R72	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W

Symbol No.	Part No.	Part Name	Description	
R73	NRVA02D-4700	M.F.RESISTOR	470	1/10W
R74	NRVA02D-4702	M.F.RESISTOR	47K	1/10W
R75	NRVA02D-75R0	M.F.RESISTOR	75	1/10W
R76	NRVA02D-75R0	M.F.RESISTOR	75	1/10W
R77	NRVA02D-75R0	M.F.RESISTOR	75	1/10W
R78	NRVA02D-75R0	M.F.RESISTOR	75	1/10W
R79	NRVA02D-1001	M.F.RESISTOR	1.0K	1/10W
R80	NRVA02D-4703	M.F.RESISTOR	470K	1/10W
R81	NRVA02D-1801	M.F.RESISTOR	1.8K	1/10W
R82	NRVA02D-2201	M.F.RESISTOR	2.2K	1/10W
R83	NRVA02D-4703	M.F.RESISTOR	470K	1/10W
R84	NRVA02D-1002	M.F.RESISTOR	10K	1/10W
R85	NRVA02D-5601	M.F.RESISTOR	5.6K	1/10W
R86	NRVA02D-3301	M.F.RESISTOR	3.3K	1/10W
R87	NRVA02D-3301	M.F.RESISTOR	3.3K	1/10W
R88	NRVA02D-1503	M.F.RESISTOR	150K	1/10W
R89	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R90	NRVA02D-2202	M.F.RESISTOR	22K	1/10W
R91	NRVA02D-2202	M.F.RESISTOR	22K	1/10W
R92	NRVA02D-4701	M.F.RESISTOR	4.7K	1/10W
R93	NRVA02D-2203	M.F.RESISTOR	220K	1/10W
R94	NRVA02D-4703	M.F.RESISTOR	470K	1/10W
R95	NRVA02D-2202	M.F.RESISTOR	22K	1/10W
R96	NRVA02D-4702	M.F.RESISTOR	47K	1/10W
R97	NRVA02D-2203	M.F.RESISTOR	220K	1/10W
R98	NRVA02D-4703	M.F.RESISTOR	470K	1/10W
R99	NRVA02D-1002	M.F.RESISTOR	10K	1/10W
R100	NRVA02D-1002	M.F.RESISTOR	10K	1/10W
R101	NRVA02D-2702	M.F.RESISTOR	27K	1/10W
R102	NRVA02D-2201	M.F.RESISTOR	2.2K	1/10W
R103	NRVA02D-2201	M.F.RESISTOR	2.2K	1/10W
VR1	QVPB609-103	VR	10K	RF AGC
VR3	QVPB609-502	VR	5.0K	RET LEV
C2	NCF21EZ-104	C CAP	0.10	25V
C4	NCF21EZ-104	C CAP	0.10	25V
C5	NCF21EZ-104	C CAP	0.10	25V
C7	NCT03UJ-180	C CAP	18P	50V
C8	NCF21EZ-104	C CAP	0.10	25V
C15	NCF21EZ-104	C CAP	0.10	25V
C16	NCF21EZ-104	C CAP	0.10	25V
C17	QER41CM-475	T CAP	4.7	16V
C18	QFN41HJ-393	MY CAP	0.039	50V
C19	NCF21EZ-104	C CAP	0.10	25V
C20	NCF21EZ-104	C CAP	0.10	25V
C21	NCT03UJ-470	C CAP	47P	50V
C22	QETA1AM-107	E CAP	100	10V
C23	QER41CM-476	E CAP	47	16V
C24	NCF21EZ-104	C CAP	0.10	25V
C29	QER41CM-476	E CAP	47	16V
C51	QER40JM-107	E CAP	100	6.3V
C52	QER41CM-476	E CAP	47	16V
C53	NCF21EZ-104	C CAP	0.10	25V
C54	QFN41HJ-473	MYLAR CAPACITOR	0.047	50V
C55	NCT03CH-471	C CAP	470P	50V
C56	NCT03CH-471	C CAP	470P	50V
C57	NCT03CH-121	C CAP	120P	50V

Symbol No.	Part No.	Part Name	Description	
C58	NCT03CH-101	C CAP	100P	50V
C59	NCB21HK-103	CER.CAPACITOR-M	0.010	50V
C60	NCT03CH-390	C CAP	39P	50V
C61	NCT03CH-270	C CAP	27P	50V
C62	NCT03CH-270	C CAP	27P	50V
C63	NCB21HK-103	CER.CAPACITOR-M	0.010	50V
C64	NCT03CH-102	C CAP	1000P	50V
C65	NCF21EZ-104	C CAP	0.10	25V
C66	QER41CM-476	E CAP	47	16V
C67	QETA0JM-108	E CAP	1000	6.3V
C68	QETA0JM-108	E CAP	1000	6.3V
C69	QER41CM-476	E CAP	47	16V
C70	NCT03CH-102	C CAP	1000P	50V
C71	NCF21EZ-104	C CAP	0.10	25V
C72	NCF21EZ-104	C CAP	0.10	25V
C73	NCT03CH-102	C CAP	1000P	50V
C74	NCB21HK-472	C CAP	4700P	50V
C75	NCT03CH-222	CER.CAPACITOR-M	2200P	50V
C76	NCT03CH-222	CER.CAPACITOR-M	2200P	50V
C77	NCF21EZ-104	C CAP	0.10	25V
C78	QER41CM-106	E CAP	10	16V
C79	QEN41HM-474	NP CAP	0.47	50V
C80	NCF21EZ-104	C CAP	0.10	25V
C81	NCF21EZ-104	C CAP	0.10	25V
C82	NCT03CH-560	CER.CAPACITOR-M	56P	50V
C83	NCF21EZ-104	C CAP	0.10	25V
C84	NCF21EZ-104	C CAP	0.10	25V
C85	NCF21EZ-104	C CAP	0.10	25V
C86	NCT03CH-330	CER.CAPACITOR-M	33P	50V
C87	NCF21EZ-104	C CAP	0.10	25V
C88	NCF21EZ-104	C CAP	0.10	25V
C89	NCF21EZ-104	C CAP	0.10	25V
C90	NCF21EZ-104	C CAP	0.10	25V
L1	SCV1908-R39	PEAKING COIL	0.39 $\mu$ H	
L2	SCV1908-R39	PEAKING COIL	0.39 $\mu$ H	
L3	SCV1908-R27	COIL	0.27 $\mu$ H	
L4	SCV1908-R27	COIL	0.27 $\mu$ H	
L5	SCV1908-R22	COIL	0.22 $\mu$ H	
L6	SCV1908-R15	COIL	0.15 $\mu$ H	
L7	SCV1908-R27	COIL	0.27 $\mu$ H	
L8	SCV1908-R39	PEAKING COIL	0.39 $\mu$ H	
L10	SCV1908-R27	COIL	0.27 $\mu$ H	
LC1	EXC-EMT102BT	LC FILTER		
RY3	SCV2078-001	RELAY		
S1	SCV1147-003	CONNECTOR		
S2	SCV1147-003	CONNECTOR		
S3	SCV1147-004	CONNECTOR		
CN1	SCV0501-001	CONNECTOR	30-PIN	
JK1	SCV2041-001	RF CONNECTOR		

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<SCK1113-2-00A>

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Symbol No.	Part No.	Part Name	Description
K1	SSV0939-001	FERRITE BEAD	
<b>CBM1 CBMC1114-1-00A 45BPA CBM</b>			
C1	NCT03CH-390	C CAP	39P 50V
C2	NCT03CH-120	CER.CAPACITOR-M	12P 50V
C3	NCT03CH-7R0	C CAP	7.0P 50V
C4	NCT03CH-390	C CAP	39P 50V
C5	NCT03CH-470	C CAP	47P 50V
C6	NCT03CH-2R0	CER.CAPACITOR-M	2.0P 50V
C7	NCT03CH-2R0	CER.CAPACITOR-M	2.0P 50V
C8	NCT03CH-330	CER.CAPACITOR-M	33P 50V
C9	NCT03CH-330	CER.CAPACITOR-M	33P 50V
C10	NCT03CH-6R0	C CAP	6.0P 50V
C11	NCT03CH-390	C CAP	39P 50V
C12	NCT03CH-470	C CAP	47P 50V
C14	NCT03CH-330	CER.CAPACITOR-M	33P 50V
C15	NCT03CH-271	CERA.CAPA	270P 50V
C16	NCT03CH-330	CER.CAPACITOR-M	33P 50V
C17	NCT03CH-560	CER.CAPACITOR-M	56P 50V
C18	NCT03CH-390	C CAP	39P 50V
C19	NCT03CH-2R0	CER.CAPACITOR-M	2.0P 50V
C20	NCT03CH-4R0	CER.CAPACITOR-M	4.0P 50V
C21	NCT03CH-820	CER.CAPACITOR-M	82P 50V
C22	NCT03CH-680	C CAP	68P 50V
<b>CBM2 CBMC114-2-00A RET OUT CBM</b>			
IC1	MC14577BF	I.C.(MONO-ANA)	MOTOROLA
IC2	NJM4560MD	I.C.(M)	JRC
R1	NRVA02D-5600	M.F.RESISTOR	560 1/10W
R2	NRVA02D-5600	M.F.RESISTOR	560 1/10W
R3	NRVA02D-75R0	M.F.RESISTOR	75 1/10W
R4	NRVA02D-75R0	M.F.RESISTOR	75 1/10W
R5	NRVA02D-4702	M.F.RESISTOR	47K 1/10W
R6	NRVA02D-5600	M.F.RESISTOR	560 1/10W
R7	NRVA02D-5600	M.F.RESISTOR	560 1/10W
R8	NRVA02D-6801	M.F.RESISTOR	6.8K 1/10W
R9	NRVA02D-3301	M.F.RESISTOR	3.3K 1/10W
C1	NCT03CH-100	C CAP	10P 50V
C2	NCT03CH-391	C CAP	390P 50V
C4	NCT03CH-102	C CAP	1000P 50V
C6	NCT03CH-391	C CAP	390P 50V
C8	NCT03CH-100	C CAP	10P 50V
C9	NCF21EZ-104	C CAP	0.10 25V
L1	SCV1950-3R9	PEAKING COIL	3.9μH
L2	SCV1950-3R9	PEAKING COIL	3.9μH

Symbol No.	Part No.	Part Name	Description
IC1	NJM1496D	I.C.(MONO-ANA)	JRC
IC2	MC14001BFL	I.C.(DIGI-MOS)	MOTROLA
IC3	RC78L05UA	I.C.(MONO-ANA)	RAYTHEON
IC4	RC79L05UA	I.C.(M)	RAYTHEON
Q1	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q2	2SC1906	TRANSISTOR	HITACHI
Q3	2SC1906	TRANSISTOR	HITACHI
Q4	2SC1906	TRANSISTOR	HITACHI
Q5	2SC1906	TRANSISTOR	HITACHI
Q7	2SA781K	SI.TRANSISTOR	HITACHI
Q8	2SC1906	TRANSISTOR	HITACHI
Q9	2SA781K	SI.TRANSISTOR	HITACHI
Q10	2SC1906	TRANSISTOR	HITACHI
Q11	2SA781K	SI.TRANSISTOR	HITACHI
R1	NRVA02D-22R0	M.F.RESISTOR	22 1/10W
R2	NRVA02D-5601	M.F.RESISTOR	5.6K 1/10W
R3	NRVA02D-5601	M.F.RESISTOR	5.6K 1/10W
R4	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R5	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R6	NRVA02D-2702	M.F.RESISTOR	27K 1/10W
R7	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R8	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R9	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R10	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R11	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R12	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R13	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W
R14	NRVA02D-1501	M.F.RESISTOR	1.5K 1/10W
R15	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W
R16	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R17	NRVA02D-2702	M.F.RESISTOR	27K 1/10W
R18	NRVA02D-4700	M.F.RESISTOR	470 1/10W
R19	NRSA02J-0R0	M.G.RESISTOR	0 1/10W
R20	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R21	NRVA02D-1802	M.F.RESISTOR	18K 1/10W
R22	NRVA02D-4700	M.F.RESISTOR	470 1/10W
R23	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R24	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R25	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R26	NRVA02D-2702	M.F.RESISTOR	27K 1/10W
R27	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R28	NRVA02D-10R0	M.F.RESISTOR	10 1/10W
R29	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R30	NRVA02D-10R0	M.F.RESISTOR	10 1/10W
R31	NRVA02D-8200	M.F.RESISTOR	820 1/10W
R32	NRVA02D-2701	M.F.RESISTOR	2.7K 1/10W
R33	NRVA02D-2200	M.F.RESISTOR	220 1/10W
R34	NRVA02D-22R0	M.F.RESISTOR	22 1/10W
R35	NRVA02D-1501	M.F.RESISTOR	1.5K 1/10W
R36	NRVA02D-1200	M.F.RESISTOR	120 1/10W
R37	NRVA02D-10R0	M.F.RESISTOR	10 1/10W
R38	NRVA02D-10R0	M.F.RESISTOR	10 1/10W
R39	NRVA02D-10R0	M.F.RESISTOR	10 1/10W
R40	NRVA02D-10R0	M.F.RESISTOR	10 1/10W
R41	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R42	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R43	NRVA02D-5600	M.F.RESISTOR	560 1/10W

Symbol No.	Part No.	Part Name	Description	
R44	NRVA02D-5600	M.F.RESISTOR	560	1/10W
R45	NRVA02D-10R0	M.F.RESISTOR	10	1/10W
R46	NRVA02D-10R0	M.F.RESISTOR	10	1/10W
R47	NRVA02D-10R0	M.F.RESISTOR	10	1/10W
R48	NRVA02D-10R0	M.F.RESISTOR	10	1/10W
R49	NRVA02D-10R0	M.F.RESISTOR	10	1/10W
R50	NRVA02D-75R0	M.F.RESISTOR	75	1/10W
R51	NRSA02J-0R0	M.G.RESISTOR	0	1/10W
R52	NRVA02D-10R0	M.F.RESISTOR	10	1/10W
R53	NRVA02D-10R0	M.F.RESISTOR	10	1/10W
R54	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R55	NRSA02J-750	M.G.RESISTOR	75	1/10W
VR1	QVPB609-102	VR	1.0K	MOD
VR2	QVPB609-202	VR	2.0K	DC SET
VR3	QVPB609-102	VR	1.0K	RF GAIN
VR4	QVPB609-102	VR	1.0K	BALLANCE
VR5	QVPB609-202	VR	2K	RF DC OFFSET
C1	QETA1AM-107	E CAP	100	10V
C2	QETA1AM-107	E CAP	100	10V
C3	QER41CM-476	E CAP	47	16V
C4	QJ41VM-105	T CAP	1.0	35V
C6	NCF21EZ-104	C CAP	0.10	25V
C7	NCF21EZ-104	C CAP	0.10	25V
C8	QER40JM-107	E CAP	100	6.3V
C9	NCF21EZ-104	C CAP	0.10	25V
C10	NCT03CH-330	CER.CAPACITOR-M	33P	50V
C11	NCT03CH-330	CER.CAPACITOR-M	33P	50V
C12	NCT03CH-560	CER.CAPACITOR-M	56P	50V
C13	NCT03CH-180	C CAP	18P	50V
C14	QETA1AM-107	E CAP	100	10V
C15	NCF21EZ-104	C CAP	0.10	25V
C16	NCF21EZ-104	C CAP	0.10	25V
C17	NCF21EZ-104	C CAP	0.10	25V
C18	NCF21EZ-104	C CAP	0.10	25V
C19	NCF21EZ-104	C CAP	0.10	25V
C20	NCT03CH-391	C CAP	390P	50V
C21	NCF21EZ-104	C CAP	0.10	25V
C22	NCT03CH-330	CER.CAPACITOR-M	33P	50V
C23	NCF21EZ-104	C CAP	0.10	25V
C24	NCF21EZ-104	C CAP	0.10	25V
C25	NCF21EZ-104	C CAP	0.10	25V
C26	QER41CM-476	E CAP	47	16V
C27	NCF21EZ-104	C CAP	0.10	25V
C28	NCF21EZ-104	C CAP	0.10	25V
C29	NCF21EZ-104	C CAP	0.10	25V
C30	NCF21EZ-104	C CAP	0.10	25V
C31	NCF21EZ-104	C CAP	0.10	25V
C32	NCF21EZ-104	C CAP	0.10	25V
C34	NCF21EZ-104	C CAP	0.10	25V
C35	QER41CM-476	E CAP	47	16V
C36	NCF21EZ-104	C CAP	0.10	25V
C37	NCF21EZ-104	C CAP	0.10	25V
C38	NCF21EZ-104	C CAP	0.10	25V
C39	NCF21EZ-104	C CAP	0.10	25V
C40	NCF21EZ-104	C CAP	0.10	25V
C41	NCT03CH-100	C CAP	10P	50V
C42	NCT03CH-100	C CAP	10P	50V

Symbol No.	Part No.	Part Name	Description	
C43	NCF21EZ-104	C CAP	0.10	25V
C44	NCF21EZ-104	C CAP	0.10	25V
LC1	EXC-EMT102BT	LC FILTER		
LC2	EXC-EMT102BT	LC FILTER		
LC3	EXC-EMT102BT	LC FILTER		
LC4	EXC-EMT102BT	LC FILTER		
LC5	EXC-EMT102BT	LC FILTER		
LC6	EXC-EMT102BT	LC FILTER		
X1	SCV2168-001	CRYSTAL(18MHZ)	18MHz	
S1	SCV1147-004	CONNECTOR		
S2	SCV1147-003	CONNECTOR		
S3	SCV1147-003	CONNECTOR		
CN2	SCV0501-001	CONNECTOR	30-PIN	
TP1	SSV1600-001	TEST POINT		
TP2	SSV1600-001	TEST POINT		
TP3	SSV1600-001	TEST POINT		
TP4	SSV1600-001	TEST POINT		
FL1	SCV1794-001	L.P.F		
FL2	SCV2248-001	B.P.F.		
JK2	SCV2041-001	RF CONNECTOR		
T1	SCV1914-001	RF TRANS	CMM OSC	
CBM1 CBMC1114-6-00A CFBC CBM				
IC1	NJM4560MD	I.C.(M)	JRC	
Q1	2SC2295(B.C)	TRANSISTOR	MATSUSHITA	
Q2	2SC2295(B.C)	TRANSISTOR	MATSUSHITA	
Q3	2SC2295(B.C)	TRANSISTOR	MATSUSHITA	
Q4	2SC2295(B.C)	TRANSISTOR	MATSUSHITA	
Q5	2SK198(Q.R)	F.E.T.	MATSUSHITA	
R1	NRVA02D-1802	M.F.RESISTOR	18K	1/10W
R2	NRVA02D-1002	M.F.RESISTOR	10K	1/10W
R3	NRVA02D-1001	M.F.RESISTOR	1.0K	1/10W
R4	NRVA02D-10R0	M.F.RESISTOR	10	1/10W
R5	NRVA02D-1001	M.F.RESISTOR	1.0K	1/10W
R6	NRVA02D-2201	M.F.RESISTOR	2.2K	1/10W
R7	NRVA02D-10R0	M.F.RESISTOR	10	1/10W
R8	NRVA02D-10R0	M.F.RESISTOR	10	1/10W
R9	NRVA02D-2201	M.F.RESISTOR	2.2K	1/10W
R10	NRVA02D-5601	M.F.RESISTOR	5.6K	1/10W
R11	NRVA02D-2201	M.F.RESISTOR	2.2K	1/10W

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Symbol No.	Part No.	Part Name	Description
R12	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R13	NRVA02D-1004	M.F.RESISTOR	1.0M 1/10W
R14	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
C1	NCF21EZ-104	C CAP	0.10 25V
C2	NCF21EZ-104	C CAP	0.10 25V
C3	NCF21EZ-104	C CAP	0.10 25V
C4	NCT03CH-1R0	C CAP	1.0P 50V
C5	NCF21EZ-104	C CAP	0.10 25V
C6	NEF11EM-475	T CAP	4.7 25V

Symbol No.	Part No.	Part Name	Description
IC1	CX23065A	I.C.(M)	SONY
IC2	TA78L005AP	I.C.(MONO-ANA)	TOSHIBA
IC3	TA78DS10BP	I.C.(M)	TOSHIBA
IC4	TA7302P	I.C.(M)	TOSHIBA
Q1	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q2	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q3	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
D1	MA153	DIODE	MATSUSHITA
D2	SVC321SP	VARI.CAP.DIODE	SANYO
D3	ERA15-02	SI DIODE	KYODO DENKI
D4	ERA15-02	SI DIODE	KYODO DENKI
D5	MA165	DIODE	MATSUSHITA
D6	1SS165	SI.DIODE	HITACHI
D7	MA165	DIODE	MATSUSHITA
R1	NRVA02D-3300	M.F.RESISTOR	330 1/10W
R2	NRVA02D-4702	M.F.RESISTOR	47K 1/10W
R3	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R4	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R5	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R6	NRVA02D-3902	M.F.RESISTOR	39K 1/10W
R7	NRVA02D-1502	M.F.RESISTOR	15K 1/10W
R8	NRVA02D-1003	M.F.RESISTOR	100K 1/10W
R9	NRVA02D-4702	M.F.RESISTOR	47K 1/10W
R10	NRVA02D-1502	M.F.RESISTOR	15K 1/10W
R11	NRVA02D-5601	M.F.RESISTOR	5.6K 1/10W
R12	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W
R13	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W
R14	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R15	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R16	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R17	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R18	NRVA02D-1501	M.F.RESISTOR	1.5K 1/10W
R19	NRVA02D-1003	M.F.RESISTOR	100K 1/10W
R20	NRVA02D-4700	M.F.RESISTOR	470 1/10W
R21	NRVA02D-1003	M.F.RESISTOR	100K 1/10W
R22	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R23	NRVA02D-3302	M.F.RESISTOR	33K 1/10W
R24	NRVA02D-3302	M.F.RESISTOR	33K 1/10W
R25	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W
VR1	QVPB609-503	VR	50K LEVEL ADJ
VR2	QVPB609-502	VR	5K MOD
VR3	QVPB609-502	VR	5K CARRIER LEV
VR4	QVPB609-202	VR	2K AGC LEVEL
C1	QEPA1CM-106	NP E.CAPACITOR	10 16V
C2	NCT03CH-391	C CAP	390P 50V
C3	QEJ41CM-106	T CAP	10 16V
C4	QER40JM-107	E CAP	100 6.3V
C5	QEJ41CM-106	T CAP	10 16V
C6	QEPA1CM-106	NP E.CAPACITOR	10 16V
C7	NCB21HK-103	CER.CAPACITOR-M	0.010 50V
C8	QER41CM-476	E CAP	47 16V
C9	QER41CM-476	E CAP	47 16V
C10	NCF21EZ-104	C CAP	0.10 25V



Symbol No.	Part No.	Part Name	Description
C11	QEPA1CM-106	NP. E.CAPACITOR	10 16V
C12	NCF21EZ-104	C CAP	0.10 25V
C13	QER41CM-106	E CAP	10 16V
C14	NCF21EZ-104	C CAP	0.10 25V
C15	QER41CM-476	E CAP	47 16V
C16	NCF21EZ-104	C CAP	0.10 25V
C17	QER41CM-106	E CAP	10 16V
C18	QER41CM-476	E CAP	47 16V
C19	QER41CM-106	E CAP	10 16V
C20	NCF21EZ-104	C CAP	0.10 25V
C21	QER41CM-476	E CAP	47 16V
C22	QER41CM-106	E CAP	10 16V
C23	QER41CM-476	E CAP	47 16V
C24	QER41CM-476	E CAP	47 16V
C25	NCF21EZ-104	C CAP	0.10 25V
C26	NCF21EZ-104	C CAP	0.10 25V
C27	QER41CM-476	E CAP	47 16V
C28	NCF21EZ-104	C CAP	0.10 25V
C29	QER41VM-105	T CAP	1.0 35V
C30	QEPA1HM-105	E CAP	1.0 50V
C31	QER41CM-106	E CAP	10 16V
C32	QEPA1HM-105	E CAP	1.0 50V
C33	QER41CM-106	E CAP	10 16V
C34	NCF21EZ-104	C CAP	0.10 25V
C35	QER41CM-106	E CAP	10 16V
C36	NCF21EZ-104	C CAP	0.10 25V
C37	QER41CM-476	E CAP	47 16V
L1	SCV0331-821	PEAKING COIL	820 $\mu$ H
L2	SCV1915-066	COIL	FM ADJ
LC1	EXC-EMT102BT	LC FILTER	
LC2	EXC-EMT102BT	LC FILTER	
LC3	EXC-EMT102BT	LC FILTER	
X1	SCV1873-032	CRYSTAL	3.2768MHz
X2	SCV2052-001	CRYSTAL(4.08M)	4.08MHz
S1	SCV1147-003	CONNECTOR	
S2	SCV1147-003	CONNECTOR	
CN3	SCV0501-001	CONNECTOR	30-PIN
TP1	SSV1600-001	TEST POINT	
TP2	SSV1600-001	TEST POINT	
TP3	SSV1600-001	TEST POINT	
TP4	SSV1600-001	TEST POINT	
TP5	SCV1880-001	TEST POINT	
FL1	SCV2045-001	BFP(819MHZ)	
FL2	SCV2055-001	BFP(390KHZ)	
JK3	SCV2041-001	RF CONNECTOR	

Symbol No.	Part No.	Part Name	Description
<b>CBM1 CBMC1114-4-00A FMAGC CBM</b>			
IC1	NJM4560MD	I.C.(M)	JRC
IC2	NJM4560MD	I.C.(M)	JRC
Q1	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q2	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q3	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
R1	NRVA02D-4702	M.F.RESISTOR	47K 1/10W
R2	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W
R3	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R4	NRVA02D-2702	M.F.RESISTOR	27K 1/10W
R5	NRVA02D-3901	M.F.RESISTOR	3.9K 1/10W
R6	NRVA02D-47R0	M.F.RESISTOR	47 1/10W
R7	NRVA02D-8200	M.F.RESISTOR	820 1/10W
R8	NRVA02D-1003	M.F.RESISTOR	100K 1/10W
R9	NRVA02D-3903	M.F.RESISTOR	390K 1/10W
R10	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R11	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
C1	NCF21EZ-104	C CAP	0.10 25V
C2	NCF21EZ-104	C CAP	0.10 25V
C3	NCF21EZ-104	C CAP	0.10 25V
C4	NCT03CH-152	C CAP	1500P 50V
C5	NCT03CH-471	C CAP	470P 50V
<b>CBM2 CBMC1114-9-00A FMMOD CBM</b>			
IC1	NJU6321PE	I.C.(M)	JRC
IC2	TC7S00F	I.C.(DIGI-MOS)	TOSHIBA
Q1	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q2	2SA1022(B.C)	TRANSISTOR	MATSUSHITA
R1	NRVA02D-15R0	M.F.RESISTOR	15 1/10W
R2	NRVA02D-4700	M.F.RESISTOR	470 1/10W
R3	NRVA02D-4702	M.F.RESISTOR	47K 1/10W
R4	NRVA02D-4702	M.F.RESISTOR	47K 1/10W
R5	NRVA02D-1501	M.F.RESISTOR	1.5K 1/10W
R6	NRVA02D-6801	M.F.RESISTOR	6.8K 1/10W
R7	NRVA02D-4702	M.F.RESISTOR	47K 1/10W
R8	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R9	NRVA02D-1201	M.F.RESISTOR	1.2K 1/10W
C1	NCB21HK-103	CER.CAPACITOR-M	0.010 50V
C2	NCB21HK-103	CER.CAPACITOR-M	0.010 50V
C3	NCB21HK-103	CER.CAPACITOR-M	0.010 50V
C4	NCF21EZ-104	C CAP	0.10 25V
C5	NCF21EZ-104	C CAP	0.10 25V
C6	NCF21EZ-104	C CAP	0.10 25V
C7	NCT03CH-390	C CAP	39P 50V
C8	NCT03CH-390	C CAP	39P 50V

Symbol No.	Part No.	Part Name	Description
<b>CBM5 CBMC1114-A-00A SIDLF CBM</b>			
IC1	NJU6321PE	I.C.(M)	JRC
IC2	NJM4560MD	I.C.(M)	JRC
R1	NRVA02D-4702	M.F.RESISTOR	47K 1/10W
R2	NRVA02D-3302	M.F.RESISTOR	33K 1/10W
R3	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R4	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R5	NRVA02D-8201	M.F.RESISTOR	8.2K 1/10W
C1	NCF21EZ-104	C CAP	0.10 25V
C2	NCT03CH-330	CER.CAPACITOR-M	33P 50V
C3	NCT03CH-330	CER.CAPACITOR-M	33P 50V
C4	NCF21EZ-104	C CAP	0.10 25V
C5	NCT03CH-152	C CAP	1500P 50V
C6	NCT03CH-152	C CAP	1500P 50V
C7	NCT03CH-152	C CAP	1500P 50V
C8	NCF21EZ-104	C CAP	0.10 25V
<b>CBM6 CBMC1114-8-00A SIDAM CBM</b>			
IC1	RC78L05UA	I.C.(MONO-ANA)	RAYTHEON
IC2	NJM1496M	I.C.(M)	JRC
R1	NRVA02D-8201	M.F.RESISTOR	8.2K 1/10W
R2	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R3	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R4	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R5	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R6	NRVA02D-8201	M.F.RESISTOR	8.2K 1/10W
R7	NRVA02D-3901	M.F.RESISTOR	3.9K 1/10W
R8	NRVA02D-3901	M.F.RESISTOR	3.9K 1/10W
C1	NCF21EZ-104	C CAP	0.10 25V
C2	NCF21EZ-104	C CAP	0.10 25V
C3	NCF21EZ-104	C CAP	0.10 25V
C4	NCF21EZ-104	C CAP	0.10 25V
C5	NCF21EZ-104	C CAP	0.10 25V
<b>CBM7 CBMC1114-B-00A SIDBU CBM</b>			
Q1	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q2	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
R1	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R2	NRVA02D-823	M.F.RESISTOR	82K 1/10W
R3	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R4	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R5	NRVA02D-1202	M.F.RESISTOR	12K 1/10W
R6	NRVA02D-1501	M.F.RESISTOR	1.5K 1/10W
R7	NRVA02D-1501	M.F.RESISTOR	1.5K 1/10W

Symbol No.	Part No.	Part Name	Description
R8	NRVA02D-1501	M.F.RESISTOR	1.5K 1/10W
R9	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
C1	NCF21EZ-104	C CAP	0.10 25V
C2	NCF21EZ-104	C CAP	0.10 25V
C3	NCF21EZ-104	C CAP	0.10 25V
C4	NCT03CH-331	C CAP	330P 50V
C5	NCT03CH-180	C CAP	18P 50V
C6	NCT03CH-471	C CAP	470P 50V
C7	NCT03CH-470	C CAP	47P 50V
C8	NCT03CH-331	C CAP	330P 50V
C9	NCT03CH-180	C CAP	18P 50V
L1	SCV1950-561Z	PEAKING COIL	560μH
L2	SCV1950-561Z	PEAKING COIL	560μH
<b>CBM8 CBMC1114-C-00A LFMIX CBM</b>			
Q1	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q2	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q3	2SA1022(B.C)	TRANSISTOR	MATSUSHITA
Q4	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q5	2SA1022(B.C)	TRANSISTOR	MATSUSHITA
R1	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R2	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R3	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R4	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R5	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R6	NRVA02D-8200	M.F.RESISTOR	820 1/10W
R7	NRVA02D-10R0	M.F.RESISTOR	10 1/10W
R8	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R9	NRVA02D-2200	M.F.RESISTOR	220 1/10W
R10	NRVA02D-10R0	M.F.RESISTOR	10 1/10W
R11	NRSA02J-4R7	MGR	4.7 1/10W
R12	NRSA02J-4R7	MGR	4.7 1/10W
R13	NRVA02D-75R0	M.F.RESISTOR	75 1/10W
C1	NCF21EZ-104	C CAP	0.10 25V
C2	NCF21EZ-104	C CAP	0.10 25V
C3	NCF21EZ-104	C CAP	0.10 25V
C4	NCF21EZ-104	C CAP	0.10 25V
C5	NCF21EZ-104	C CAP	0.10 25V
C6	NCF21EZ-104	C CAP	0.10 25V
C7	NCF21EZ-104	C CAP	0.10 25V
C8	NCF21EZ-104	C CAP	0.10 25V
C9	NCF21EZ-104	C CAP	0.10 25V
C10	NCF21EZ-104	C CAP	0.10 25V
<b>CBM9 CBMC1114-E-00A SIDRF CBM</b>			
Q1	3SK222	F.E.T	NEC

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Symbol No.	Part No.	Part Name	Description
R1	NRVA02D-2203	M.F.RESISTOR	220K 1/10W
R2	NRVA02D-6802	M.F.RESISTOR	68K 1/10W
R3	NRVA02D-2200	M.F.RESISTOR	220 1/10W
R4	NRVA02D-4700	M.F.RESISTOR	470 1/10W
R5	NRVA02D-4700	M.F.RESISTOR	470 1/10W
C6	NCF21EZ-104	C CAP	0.10 25V
C7	NCF21EZ-104	C CAP	0.10 25V
C8	NCF21EZ-104	C CAP	0.10 25V
C9	NCF21EZ-104	C CAP	0.10 25V
<b>CBM10 CBMC1114-D-00A SIDDH CBM</b>			
IC1	NJM4560MD	I.C.(M)	JRC
Q1	2SA1022(B.C)	TRANSISTOR	MATSUSHITA
Q2	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q3	2SA1022(B.C)	TRANSISTOR	MATSUSHITA
Q4	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
R1	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R2	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R3	NRVA02D-2701	M.F.RESISTOR	2.7K 1/10W
R4	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R5	NRVA02D-5602	M.F.RESISTOR	56K 1/10W
R6	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R7	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R8	NRVA02D-2701	M.F.RESISTOR	2.7K 1/10W
R9	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R10	NRVA02D-3303	M.F.RESISTOR	330K 1/10W
C1	NCF21EZ-104	C CAP	0.10 25V
C2	NCT03CH-221	C CAP	220P 50V
C3	NCF21EZ-104	C CAP	0.10 25V
C4	NCF21EZ-104	C CAP	0.10 25V

Symbol No.	Part No.	Part Name	Description
IC1	NJM4560MD	I.C.(M)	JRC
IC2	NJU6321PE	I.C.(M)	JRC
IC3	TA78L005AP	I.C.(MONO-ANA)	TOSHIBA
IC4	NJM4560MD	I.C.(M)	JRC
IC6	NJM4560MD	I.C.(M)	JRC
IC7	DN819	I.C.(M)	MATSUSHITA
IC8	NJM79L09A	I.C.(MONO-ANA)	JRC
IC9	TC4W53F	I.C.(DIGI-MOS)	TOSHIBA
IC10	TA7357AP	I.C.(MONO-ANA)	TOSHIBA
Q3	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q4	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q5	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q6	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
Q7	2SC1509(R)	SI.TRANSISTOR	MATSUSHITA
Q8	2SC1509(R)	SI.TRANSISTOR	MATSUSHITA
Q9	3SK101(Y)	F.E.T.	TOSHIBA
Q10	2SA1020(Y)	SI.TRANSISTOR	TOSHIBA
Q11	2SC2655(Y)	SI.TRANSISTOR	TOSHIBA
Q12	DTC124EU	TRANSISTOR	ROHM
D2	MA153	DIODE	MATSUSHITA
D3	HZM6CTL	ZENER DIODE	HITACHI
D4	1SS165	SI.DIODE	HITACHI
D5	ERB81-004K	SI.DIODE	FUJI ELECTRIC
D6	ERB81-004K	SI.DIODE	FUJI ELECTRIC
R3	NRVA02D-1003	M.F.RESISTOR	100K 1/10W
R4	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W
R6	NRVA02D-2200	M.F.RESISTOR	220 1/10W
R7	NRVA02D-8200	M.F.RESISTOR	820 1/10W
R8	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R9	NRVA02D-3901	M.F.RESISTOR	3.9K 1/10W
R10	NRVA02D-4700	M.F.RESISTOR	470 1/10W
R11	NRVA02D-8200	M.F.RESISTOR	820 1/10W
R12	NRVA02D-1003	M.F.RESISTOR	100K 1/10W
R13	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R14	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R15	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R16	NRVA02D-6801	M.F.RESISTOR	6.8K 1/10W
R17	NRVA02D-8201	M.F.RESISTOR	8.2K 1/10W
R18	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R19	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R20	NRVA02D-75R0	M.F.RESISTOR	75 1/10W
R21	NRVA02D-3302	M.F.RESISTOR	33K 1/10W
R22	NRVA02D-4702	M.F.RESISTOR	47K 1/10W
R23	NRVA02D-1000	M.F.RESISTOR	100 1/10W
R24	NRVA02D-1000	M.F.RESISTOR	100 1/10W
R25	NRVA02D-1000	M.F.RESISTOR	100 1/10W
R26	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R27	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R28	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R29	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R30	NRVA02D-5601	M.F.RESISTOR	5.6K 1/10W
R31	NRVA02D-3302	M.F.RESISTOR	33K 1/10W
R32	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R33	NRVA02D-1003	M.F.RESISTOR	100K 1/10W
R34	NRVA02D-4700	M.F.RESISTOR	470 1/10W
R35	NRVA02D-4700	M.F.RESISTOR	470 1/10W



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Symbol No.	Part No.	Part Name	Description
R3	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R4	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R5	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R6	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R7	NRVA02D-1202	M.F.RESISTOR	12K 1/10W
R8	NRVA02D-2201	M.F.RESISTOR	2.2K 1/10W
R9	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R10	NRVA02D-6801	M.F.RESISTOR	6.8K 1/10W
R11	NRVA02D-1502	M.F.RESISTOR	15K 1/10W
R12	NRVA02D-1802	M.F.RESISTOR	18K 1/10W
C1	NCF21EZ-104	C CAP	0.10 25V
C2	NCF21EZ-104	C CAP	0.10 25V
C3	NCF21EZ-104	C CAP	0.10 25V
C4	NCF21EZ-104	C CAP	0.10 25V
C5	NCF21EZ-104	C CAP	0.10 25V
<b>CBM2 CBMC1114-H-00A AM AGC CBM</b>			
IC1	NJM2904M	I.C.(M)	JRC
D1	MA153	DIODE	MATSUSHITA
R1	NRVA02D-1001	M.F.RESISTOR	1.0K 1/10W
R2	NRVA02D-2203	M.F.RESISTOR	220K 1/10W
R3	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R4	NRVA02D-1002	M.F.RESISTOR	10K 1/10W
R5	NRVA02D-3301	M.F.RESISTOR	3.3K 1/10W
R6	NRVA02D-1003	M.F.RESISTOR	100K 1/10W
R7	NRVA02D-2701	M.F.RESISTOR	2.7K 1/10W
C1	NCF21EZ-104	C CAP	0.10 25V
C2	NCF21EZ-104	C CAP	0.10 25V
<b>CBM3 CBMC1114-G-00A DCLOG CBM</b>			
IC1	TC4011BF	I.C.(M)	TOSHIBA
Q1	2SC2295(B.C)	TRANSISTOR	MATSUSHITA
R1	NRVA02D-1003	M.F.RESISTOR	100K 1/10W
R2	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R3	NRVA02D-6801	M.F.RESISTOR	6.8K 1/10W
R4	NRVA02D-1502	M.F.RESISTOR	15K 1/10W
R5	NRVA02D-2701	M.F.RESISTOR	2.7K 1/10W
R6	NRVA02D-5601	M.F.RESISTOR	5.6K 1/10W
R7	NRVA02D-5601	M.F.RESISTOR	5.6K 1/10W
R8	NRVA02D-2701	M.F.RESISTOR	2.7K 1/10W
C1	NCF21EZ-104	C CAP	0.10 25V

Symbol No.	Part No.	Part Name	Description
Q1	2SC3311A(RS)	SI.TRANSISTOR	MATSUSHITA
Q2	2SC2610BK	TRANSISTOR	HITACHI
Q3	2SC3298B(Y)	SI.TRANSISTOR	TOSHIBA
D1	HZS36-2L	ZENER DIODE	
D2	HZS36-2L	ZENER DIODE	
D3	MA165	DIODE	MATSUSHITA
D4	HZS12JB2	ZENER DIODE	HITACHI
R1	QRV141F-8200	M.F.RESISTOR	820 1/4W
R2	QRV141F-4702	MFR	47.0K 1/4W
R3	QRV141F-4702	MFR	47.0K 1/4W
R4	QRV141F-1003	M.F.RESISTOR	100K 1/4W
R5	QRV141F-1003	M.F.RESISTOR	100K 1/4W
R6	QRV141F-1003	M.F.RESISTOR	100K 1/4W
R7	QRV141F-1003	M.F.RESISTOR	100K 1/4W
R8	NRSA02J-151	MGR	150 1/10W
R9	NRSA02J-750	MGR	75 1/10W
R10	NRSA02J-OR0	M.G.RESISTOR	0 1/10W
R13	NRSA02J-OR0	M.G.RESISTOR	0 1/10W
C1	SCV0058-104	MYLAR CAPACITOR	0.1 400V
C3	SCV0058-104	MYLAR CAPACITOR	0.1 400V
C4	QETA1HM-106	E CAP	10 50V
C5	QETA1HM-106	E CAP	10 50V
C6	QCZ0206-104	CER.CAPACITOR-S	0.10 50V
C9	NCT03CH-221	C CAP	220P 50V
C10	NCT03CH-181	CER.CAPACITOR-M	180P 50V
C11	NCT03CH-821	C CAP	820P 50V
C12	NCT03CH-391	C CAP	390P 50V
C13	NCT03CH-681	CER.CAPACITOR-M	680P 50V
C14	NCT03CH-121	C CAP	120P 50V
C15	NCT03CH-182	C CAP	1800P 50V
C16	NCT03CH-821	C CAP	820P 50V
C17	NCT03CH-821	C CAP	820P 50V
C18	NCT03CH-101	C CAP	100P 50V
C19	NCS21HJ-272	C CAP	2700P 50V
C20	NCT03CH-221	C CAP	220P 50V
C21	NCT03CH-391	C CAP	390P 50V
C22	NCT03CH-121	C CAP	120P 50V
C23	NCT03CH-182	C CAP	1800P 50V
C24	NCT03CH-181	CER.CAPACITOR-M	180P 50V
C25	NCT03CH-221	C CAP	220P 50V
C26	NCT03CH-181	CER.CAPACITOR-M	180P 50V
C27	NCT03CH-821	C CAP	820P 50V
C28	NCT03CH-391	C CAP	390P 50V
C29	NCT03CH-681	CER.CAPACITOR-M	680P 50V
C30	NCT03CH-121	C CAP	120P 50V
C31	NCT03CH-471	C CAP	470P 50V
C32	NCT03CH-271	CERA.CAPA	270P 50V
C33	NCT03CH-221	C CAP	220P 50V
C34	NCT03CH-390	C CAP	39P 50V
C35	NCT03CH-561	CER.CAPACITOR-M	560P 50V
C36	NCT03CH-271	CERA.CAPA	270P 50V
C37	NCT03CH-121	C CAP	120P 50V
C38	NCT03CH-270	C CAP	27P 50V
C39	NCT03CH-561	CER.CAPACITOR-M	560P 50V
C40	NCT03CH-6R0	C CAP	6.0P 50V

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Symbol No.	Part No.	Part Name	Description
L1	SCV2039-001	COIL	10 $\mu$ H
L2	SCV2040-001	TRANS	500 $\mu$ H
L3	SCV1908-2R7	COIL	2.7 $\mu$ H
L4	SCV1908-4R7	COIL	4.7 $\mu$ H
L5	SCV1908-1R8	COIL	1.8 $\mu$ H
L6	SCV1908-150	PEAKING COIL	15 $\mu$ H
L7	SCV1908-150	PEAKING COIL	15 $\mu$ H
L8	SCV1908-150	PEAKING COIL	15 $\mu$ H
L9	SCV1908-2R7	COIL	2.7 $\mu$ H
L10	SCV1908-4R7	COIL	4.7 $\mu$ H
L11	SCV1908-1R8	COIL	1.8 $\mu$ H
L12	SCV1908-3R9	PEAKING COIL	3.9 $\mu$ H
L13	SCV1908-3R9	PEAKING COIL	3.9 $\mu$ H
L14	SCV1908-3R9	PEAKING COIL	3.9 $\mu$ H
S1	SCV1147-004	CONNECTOR	
S2	SCV1147-004	CONNECTOR	
CN12	SSV1591-S02	CONNECTOR	2-PIN
CN16	SCV1489-003	CONNECTOR	3-PIN
JK1	SCV2041-001	RF CONNECTOR	
JK2	SCV2041-001	RF CONNECTOR	
JK3	SCV2041-001	RF CONNECTOR	
JK4	SCV2041-001	RF CONNECTOR	
JK5	SCV2165-001	JACK	
T1	SCV2038-001	RF TRANSF	
T2	SCV1776-001	RF TRANS	

Symbol No.	Part No.	Part Name	Description
IC1	M51978P	I.C.(M)	MITSUBISHI
Q1	2SK1101	FET	FUJIELECTRIC
D1	ERB38-06	SI.DIODE	FUJII ELECTRIC
D2	ERA91-02	SI.DIODE	FUJII ELECTRIC
D3	ERA91-02	SI.DIODE	FUJII ELECTRIC
D21	ESAC85M-009	SI.DIODE	FUJII ELECTRIC
D22	ERA91-02	SI.DIODE	FUJII ELECTRIC
D23	ERA91-02	SI.DIODE	FUJII ELECTRIC
D24	HZS12B3L	ZENER DIODE	
D25	GZA5.1(Y)	ZENER DIODE	SANYO
PC1	TLP521-1	I.C(PH.COUPLER)	
PC2	TLP521-1	I.C(PH.COUPLER)	
R1	QRV141F-1802	MFR	18.0K 1/4W
R2	QRV141F-1802	MFR	18.0K 1/4W
R3	QRV141F-1802	MFR	18.0K 1/4W
R4	QRV141F-1802	MFR	18.0K 1/4W
R5	QRV141F-1802	MFR	18.0K 1/4W
R6	QRV141F-47R0	M.F.RESISTOR	47.0 1/4W
R7	QRV141F-1500	M.F.RESISTOR	150 1/4W
R8	QRG026J-473	O.M.F.RESISTOR	47K 2W
R9	QRM055K-R10	MFR	0.10 5W
R10	QRV141F-68R0	MFR	68.0 1/4W
R11	QRD161J-4R7	CR	4.7 1/6W
R12	QRV141F-10R0	M.F.RESISTOR	10.0 1/4W
R13	QRV141F-1002	MFR	10.0K 1/4W
R21	QRV141F-22R0	MFR	22.0 1/4W
R22	QRV141F-22R0	MFR	22.0 1/4W
R23	SCV1886-020	SHUNT RESISTOR	0.02 2W
R24	QRV141F-22R0	MFR	22.0 1/4W
R25	QRV141F-47R0	M.F.RESISTOR	47.0 1/4W
R26	QRV141F-4700	MFR	470 1/4W
R27	QRV141F-2701	M.F.RESISTOR	2.70K 1/4W
R28	QRV141F-1000	MFR	100 1/4W
R29	QRV141F-4700	MFR	470 1/4W
R30	QRV141F-22R0	MFR	22.0 1/4W
VR1	QVPB609-102	VR	1.0K 12V ADJ
C1	QFN42EK-224	MYLAR CAPACITOR	0.22 250V
C2	QFN42EK-224	MYLAR CAPACITOR	0.22 250V
C3	QCZ9019-222	C.CAPACITOR	2200P
C4	QCZ9019-222	C.CAPACITOR	2200P
C5	QEZO173-277	E CAP	270
C6	QEHA1HM-107	E.CAPACITOR	100 50V
C7	SCV0058-104	MYLAR CAPACITOR	0.1 400V
C21	QCY12HK-471	C CAP	470P 500V
C22	QCY12HK-471	C CAP	470P 500V
C23	QEHA1CM-108	E.CAPACITOR	1000 16V
C24	QEHA1CM-108	E.CAPACITOR	1000 16V
C25	QEHA1CM-477	E.CAPACITOR	470 16V
C26	QETA1EM-107	E.CAPACITOR-CV-	100 25V
C27	QETA1HM-106	E CAP	10 50V

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Symbol No.	Part No.	Part Name	Description
C28	QEXA1CM-107	E CAP	100 16V
C29	QCY12HK-471	C CAP	470P 500V
L21	SCV1869-001	CHOKE COIL	4.7μH
L22	SCV1870-4R7	CHOKE COIL	
L23	SCV2318-001	CHOKE COIL	
L24	SCV2318-001	CHOKE COIL	
CN8	SSV1283-004	CONNECTOR	4-PIN
CN16	SSV1283-003	CONNECTOR	3-PIN
FL1	SCV1868-001	LINE FILTER	
T1	SCV1871-001	DRIVE TRANS	
<b>CBM1 CBMC1114-K-00A PWM CBM</b>			
R1	NRVA02D-6800	M.F.RESISTOR	680 1/10W
R2	NRVA02D-2702	M.F.RESISTOR	27K 1/10W
R3	NRVA02D-2702	M.F.RESISTOR	27K 1/10W
R4	NRVA02D-4703	M.F.RESISTOR	470K 1/10W
R5	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
C1	NCB21HK-223	C CAP	0.022 50V
C2	NCF21EZ-104	C CAP	0.10 25V
C3	NCT03CH-151	C CAP	150P 50V
C4	NCT03CH-151	C CAP	150P 50V
C5	NCF21EZ-104	C CAP	0.10 25V
C6	NCB21HK-223	C CAP	0.022 50V
<b>CBM2 CBMC1114-L-00A COMP CBM</b>			
IC1	NJM2904M	I.C.(M)	JRC
R1	NRVA02D-1501	M.F.RESISTOR	1.5K 1/10W
R2	NRVA02D-2202	M.F.RESISTOR	22K 1/10W
R3	NRVA02D-1000	M.F.RESISTOR	100 1/10W
R4	NRVA02D-1501	M.F.RESISTOR	1.5K 1/10W
R5	NRVA02D-1501	M.F.RESISTOR	1.5K 1/10W
R6	NRVA02D-2203	M.F.RESISTOR	220K 1/10W
R7	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W
R8	NRVA02D-4701	M.F.RESISTOR	4.7K 1/10W
C1	NCF21EZ-104	C CAP	0.10 25V
C2	NCB21HK-333	CER.CAPACITOR-M	0.033 50V
C3	NCB21HK-103	CER.CAPACITOR-M	0.010 50V

Symbol No.	Part No.	Part Name	Description
Q1	2SC3311A(RS)	SI.TRANSISTOR	MATSUSHITA
LD1	SLB-26UR5	LED	
R1	QRD161J-222	CR	2.2K 1/6W
R2	QRD161J-223	CARBON RESISTOR	22K 1/6W
S1	SCV1881-001	PUSH SWITCH	CALL
S2	SCV0337-002	TOGGLE SWITCH	TALLY SW
CN10	SSV1591-S04	CONNECTOR	4-PIN
SP1	SC43656-095	SPACER	



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Symbol No.	Part No.	Part Name	Description
IC1	SI-3090C	I.C.(M)	SANKEN
IC2	NJM2068DD	I.C.(MONO-ANA)	JRC CV
IC3	NJM4560DD	I.C.(MONO-ANA)	JRC
IC4	TC4053BP	I.C.(M)	TOSHIBA
IC5	NJM2068DD	I.C.(MONO-ANA)	JRC CV
IC6	NJM4560DD	I.C.(MONO-ANA)	JRC
Q1	2SC3311A(RS)	SI.TRANSISTOR	MATSUSHITA
Q2	2SC3311A(RS)	SI.TRANSISTOR	MATSUSHITA
Q3	2SA1309A(RS)	TRANSISTOR	MATSUSHITA
D1	MA165	DIODE	MATSUSHITA
D2	MA165	DIODE	MATSUSHITA
D3	MA165	DIODE	MATSUSHITA
D4	MA165	DIODE	MATSUSHITA
D5	MA165	DIODE	MATSUSHITA
D6	MA165	DIODE	MATSUSHITA
D7	MA165	DIODE	MATSUSHITA
D8	MA165	DIODE	MATSUSHITA
D9	MA165	DIODE	MATSUSHITA
D10	MA165	DIODE	MATSUSHITA
D11	MA165	DIODE	MATSUSHITA
D12	MA165	DIODE	MATSUSHITA
R1	QRD161J-223	CARBON RESISTOR	22K 1/6W
R2	QRD161J-221	CR	220 1/6W
R3	QRD161J-223	CARBON RESISTOR	22K 1/6W
R4	QRD161J-223	CARBON RESISTOR	22K 1/6W
R5	QRD161J-100	CR	10 1/6W
R6	QRD161J-100	CR	10 1/6W
R7	QRD161J-473	CARBON RESISTOR	47K 1/6W
R8	QRD161J-473	CARBON RESISTOR	47K 1/6W
R9	QRD161J-681	CR	680 1/6W
R10	QRD161J-103	CARBON RESISTOR	10K 1/6W
R11	QRD161J-103	CARBON RESISTOR	10K 1/6W
R12	QRD161J-221	CR	220 1/6W
R13	QRD161J-471	CARBON RESISTOR	470 1/6W
R14	QRD161J-223	CARBON RESISTOR	22K 1/6W
R15	QRD161J-472	CR	4.7K 1/6W
R16	QRD161J-223	CARBON RESISTOR	22K 1/6W
R17	QRD161J-472	CR	4.7K 1/6W
R18	QRD161J-472	CR	4.7K 1/6W
R19	QRD161J-103	CARBON RESISTOR	10K 1/6W
R20	QRD161J-100	CR	10 1/6W
R21	QRD161J-220	CR	22 1/6W
R22	QRD161J-332	CR	3.3K 1/6W
R23	QRD161J-181	CR	180 1/6W
R24	QRD161J-103	CARBON RESISTOR	10K 1/6W
R25	QRD161J-103	CARBON RESISTOR	10K 1/6W
R26	QRD161J-222	CARBON RESISTOR	22K 1/6W
R27	QRD161J-122	CARBON RESISTOR	1.2K 1/6W
R28	QRD161J-474	CR	470K 1/6W
R29	QRD161J-221	CR	220 1/6W
R30	QRD161J-221	CR	220 1/6W
R31	QRD161J-472	CR	4.7K 1/6W
R32	QRD161J-221	CR	220 1/6W
R33	QRD161J-561	CR	560 1/6W
R34	QRD161J-561	CR	560 1/6W

Symbol No.	Part No.	Part Name	Description
R35	QRD161J-103	CARBON RESISTOR	10K 1/6W
R36	QRD161J-223	CARBON RESISTOR	22k 1/6W
R37	QRD161J-103	CARBON RESISTOR	10K 1/6W
R38	QRD161J-103	CARBON RESISTOR	10K 1/6W
R39	QRD161J-221	CR	220 1/6W
C1	QER41CM-476	E CAP	47 16V
C2	QER41CM-476	E CAP	47 16V
C3	QFN41HJ-102	MYLAR CAPACITOR	1000P 50V
C4	QFN41HJ-102	MYLAR CAPACITOR	1000P 50V
C5	QEPA1CM-106	NP E.CAPACITOR	10 16V
C6	QEPA1CM-106	NP E.CAPACITOR	10 16V
C7	QER41CM-107	E.CAPACITOR	100 16V
C8	QCS11HJ-391	C CAP	390P 50V
C9	QCS11HJ-391	C CAP	390P 50V
C10	QER41CM-476	E CAP	47 16V
C11	QER41CM-107	E.CAPACITOR	100 16V
C12	QC20206-104	CER.CAPACITOR-S	0.10 16V
C13	QER41CM-106	E CAP	10 16V
C14	QCS11HJ-470	CER.CAPACITOR-S	47P 50V
C15	QER41CM-106	E CAP	10 16V
C16	QER41CM-476	E CAP	47 16V
C17	QER41CM-476	E CAP	47 16V
C18	QER41CM-476	E CAP	47 16V
C19	QER41CM-476	E CAP	47 16V
C20	QER41CM-476	E CAP	47 16V
C21	QER41CM-476	E CAP	47 16V
C22	QER41CM-107	E.CAPACITOR	100 16V
C23	QETA1EM-108	E.CAPACITOR(CV)	1000 25V
L1	SCV0331-220	PEAKING COIL	22μH
L2	SCV0331-220	PEAKING COIL	22μH
LC1	EXC-EMT102BT	LC FILTER	
LC2	EXC-EMT102BT	LC FILTER	
LC3	EXC-EMT102BT	LC FILTER	
S1	QSS1F22-S03	SLIDE SWITCH	
CN6	SSV1591-S10	CONNECTOR	10-PIN
CN7	SSV1591-S04	CONNECTOR	4-PIN
CN9	SSV1591-S08	CONNECTOR	8-PIN
CN11	SSV1320-020	CONNECTOR	20-PIN
CN13	SSV1591-S03	CONNECTOR	3-PIN
CN14	SSV1591-S03	CONNECTOR	3-PIN
CN15	SSV1591-S04	CONNECTOR	4-PIN
CN17	SSV1591-S06	CONNECTOR	6-PIN
TP1	SSV1600-001	TEST POINT	
TP2	SSV1600-001	TEST POINT	
TP3	SSV1600-001	TEST POINT	
TP4	SSV1600-001	TEST POINT	

**6.10 PWS board assembly list** 51  
**<SCK2373-04-00A>**

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Symbol No.	Part No.	Part Name	Description
S2	SCV0335-011	TOGGLE SWITCH	
CN13	SSV1591-S03	CONNECTOR	3-PIN
CN18	SSV1591-S02	CONNECTOR	2-PIN
CN19	SSV1591-S03	CONNECTOR	3-PIN

**6.12 CNB board assembly list** 53  
**<SCK2373-07-00A>**

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Symbol No.	Part No.	Part Name	Description
C1	QCZ0206-104	CER.CAPACITOR-S	0.10
C2	QCF11HP-102	CER.CAPACITOR-S	1000P 50V
C3	QCZ0206-104	CER.CAPACITOR-S	0.10
C4	QCZ0206-104	CER.CAPACITOR-S	0.10
C5	QCF11HP-102	CER.CAPACITOR-S	1000P 50V
C6	QCZ0206-104	CER.CAPACITOR-S	0.10
CN5	SCV1978-L03	CONNECTOR	3-PIN
CN11	SCV1766-020	CONNECTOR	20-PIN
CN39	SCV1244-50S	CONNECTOR	50-PIN

**6.11 CTL board assembly list** 52  
**<SCK2373-06-00A>**

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Symbol No.	Part No.	Part Name	Description
LD1	SLR-54UR5	L.E.D.	ROHM POWER
R1	QRD161J-220	CR	22 1/6W
VR1	SCV1758-202	TRIM.RESISTOR	2K INTCOM LEVEL
S1	SCV0490-011	SLIDE SWITCH	INTCOM MIC
S2	SCV0490-011	SLIDE SWITCH	MIC
CN17	SSV1591-L06	CONNECTOR	6-PIN
SP1	SC43656-085	SPACER	